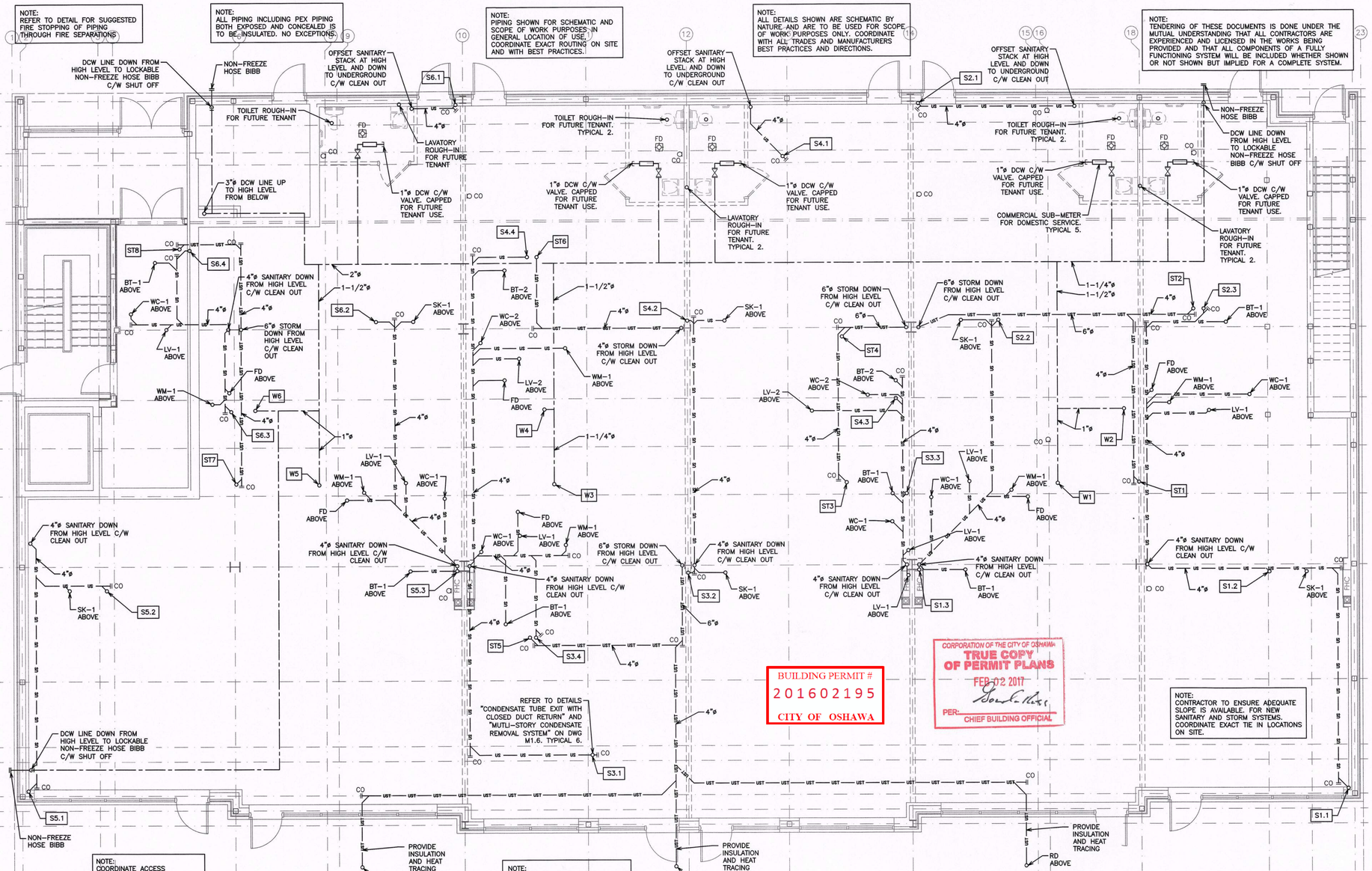
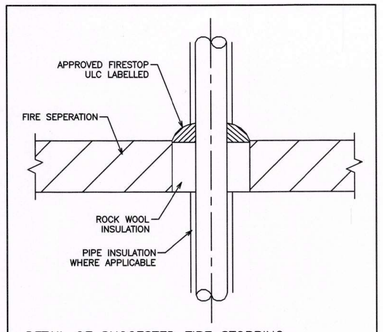




DETAIL OF SUGGESTED FIRE STOPPING
NTS

PLUMBING LEGEND	
DCW	DOMESTIC COLD WATER (DCW)
DHW	DOMESTIC HOT WATER (DHW)
US	UNBURIED SANITARY DRAINAGE (US)
S	BURIED SANITARY DRAINAGE (S)
UST	UNBURIED STORM DRAINAGE (UST)
ST	BURIED STORM DRAINAGE (ST)
	PIPE UP, BRANCH DROPPING FROM TEE, PIPE DOWN
	PIPE BREAK/CONTINUATION
XD	FLOOR (F), ROOF (R), HUB (H), FUNNEL (FF), AREA (A) DRAIN
	BALL VALVE
	CHECK VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE (PRV)
	REDUCER
	STRAINER
	UNION
P	PRESSURE GAUGE WITH PETCOCK
CO	CLEAN OUT – EXPOSED
CO	CLEAN OUT – IN FLOOR
	SANITARY TRAP
WC-1	EQUIPMENT/FIXTURE TAG

GENERAL PLUMBING NOTES:

1. PROVIDE CLEANOUTS AS REQUIRED BY CODE. SIZE OF CLEANOUTS TO BE SAME SIZE AS SANITARY LINES.
2. PROVIDE VENTS THROUGH ROOF AS REQUIRED BY CODE.
3. PROVIDE ISOLATION VALVES AT ALL HOT WATER TANKS AND ALL FIXTURES.
4. INSULATE ALL NEW DOMESTIC HOT AND COLD WATER PIPING AND SEAL ALL JOINTS IN OUTSIDE WALLS.
5. ALL NEW HOSE BIBBS TO BE COMPLETE WITH BACKFLOW PREVENTERS.
6. PROVIDE FLOOR DRAINS IN ALL SUITE UTILITY ROOMS.

NOTE: ALL HORIZONTAL SANITARY TO RUN MINIMUM 1% SLOPE. ANY HORIZONTAL SANITARY >4" TO BE RUN AT 2% SLOPE.

NOTE: COORDINATE ALL HOLES THOUGH SLAB AND MASONRY WALLS WITH GENERAL CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.

NOTE: CONTRACTOR TO SUPPLY VENTING DRAWING TO ENGINEER FOR APPROVAL BASED ON PROPOSED VENT LENGTHS AND BEST ROUTING BASED ON SITE CONDITIONS AND COORDINATION WITH OTHER TRADES. FINAL VENTING LAYOUT AND ROUTING TO BE RESPONSIBILITY OF CONTRACTOR.

NOTE: ALL ACCESS PANELS ARE TO BE LOCKABLE TYPE

HOT WATER TANK SCHEDULE			
TAG	MANUFACTURER	MODEL	CAPACITY
HWT-1	BRADFORD WHITE	RE350S6	50 GAL

PLUMBING NOTES

1. GENERAL
1.1. FOR CONTINUATION OF SITE SERVICES REFER TO SITE SERVICE DRAWING BY OTHERS. CO-ORDINATE EXACT LOCATION AND INVERTS OF SERVICES.
1.2. PROVIDE CLEANOUTS AND TRAP PRIMING FOR SANITARY AS REQUIRED BY O.B.C. AND LOCAL AUTHORITIES. CLEANOUT SIZE TO BE SAME AS SANITARY LINES.
1.3. PROVIDE COMPLETE PLUMBING VENT SYSTEM AS REQUIRED BY O.B.C. AND LOCAL AUTHORITIES, INCLUDING MIN. 3"ø VENT AT UPSTREAM END(S) OF SANITARY BUILDING DRAIN.
1.4. ISOLATION VALVES TO BE PROVIDED AT ALL FIXTURES AND HOT WATER TANK.
1.5. PIPE INSULATION TO BE 1" FOR ALL NEW AND/OR EFFECTED DOMESTIC PIPING. IN EXPOSED AREAS PROVIDE CANVAS WRAP OVER INSULATION.
2. MATERIALS
2.1. ALL PVC OR ABS TYPE PIPING TO BE USED ABOVE GROUND SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND SHALL BE CONFIRMED TO BE ACCEPTABLE BY THE AUTHORITY HAVING JURISDICTION. IF ACCEPTABLE AND USED, IT SHALL BE PROVIDED WITH U.L.C. LISTED AND APPROVED FIRE STOP DEVICE AT ALL PENETRATIONS OF ANY FIRE SEPARATION.
2.2. ALL ABOVE GROUND DOMESTIC PIPING SHALL BE TYPE 'L' COPPER OR PEX.
2.3. ALL BURIED DOMESTIC PIPING SHALL BE TYPE 'K' COPPER.
2.4. ALL ABOVE GROUND DRAINAGE PIPING SHALL BE CAST IRON 'MJ' PIPE.
2.5. ALL BURIED DRAINAGE PIPING SHALL BE DR26 PVC WITH CLASS P BEDDING.

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL PLUMBING GROUND FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENCED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 DEC 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M1.2
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOT TO SCALE

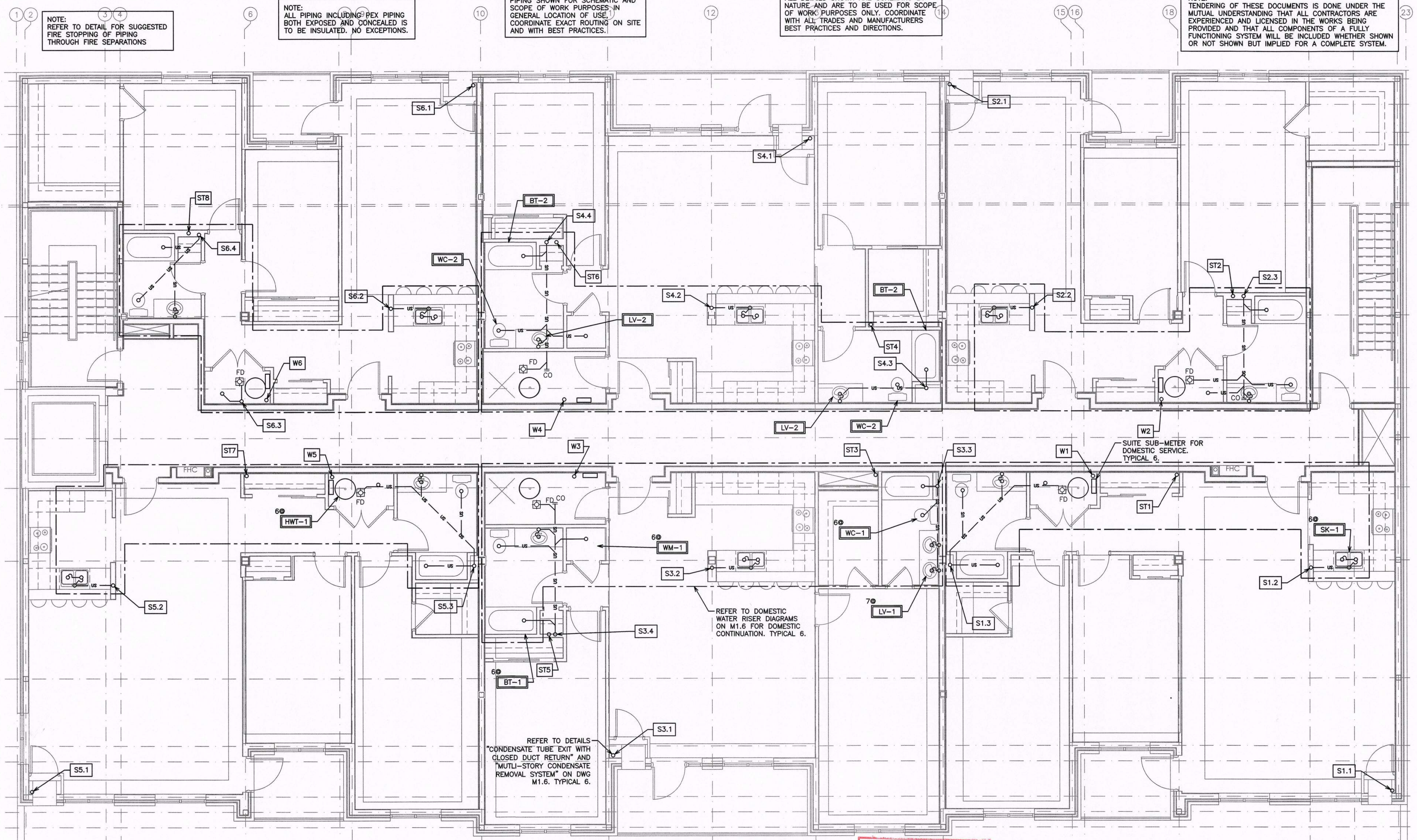
NOTE:
REFER TO DETAIL FOR SUGGESTED FIRE STOPPING OF PIPING THROUGH FIRE SEPARATIONS

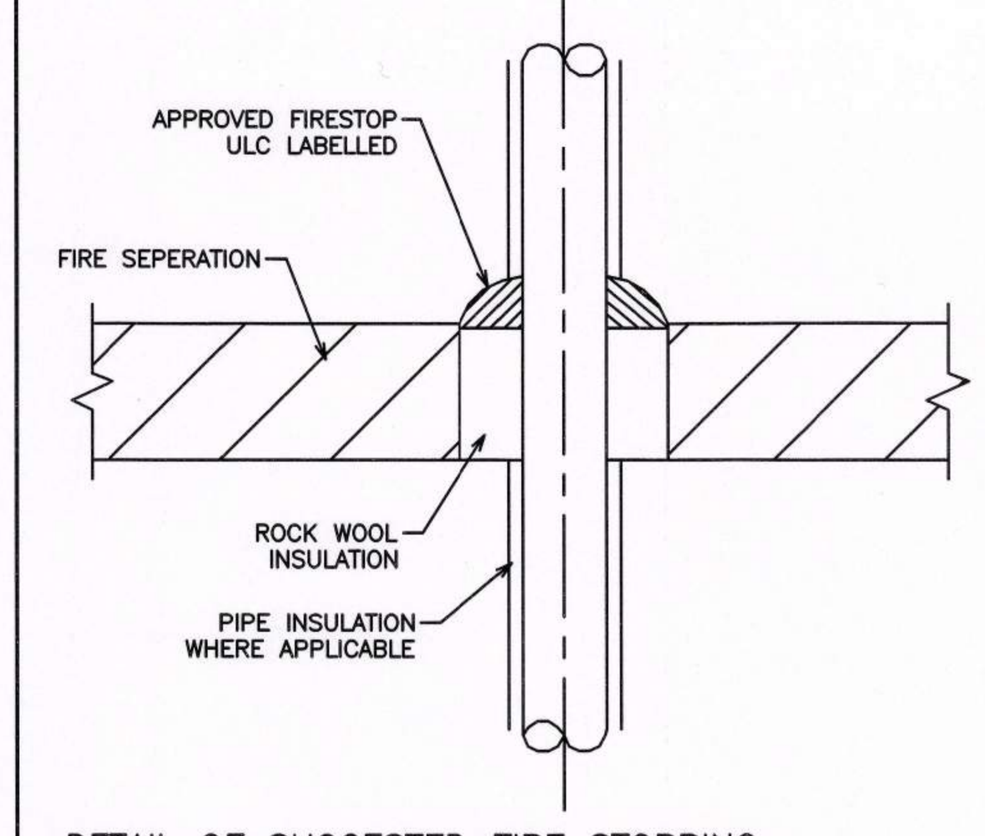
NOTE:
ALL PIPING INCLUDING PEX PIPING BOTH EXPOSED AND CONCEALED IS TO BE INSULATED. NO EXCEPTIONS.

NOTE:
PIPING SHOWN FOR SCHEMATIC AND SCOPE OF WORK PURPOSES. IN GENERAL LOCATION OF USE. COORDINATE EXACT ROUTING ON SITE AND WITH BEST PRACTICES.

NOTE:
ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.





DETAIL OF SUGGESTED FIRE STOPPING
NTS

PLUMBING LEGEND

— · — · —	DOMESTIC COLD WATER (DCW)
— — — —	DOMESTIC HOT WATER (DHW)
— US — US —	UNBURIED SANITARY DRAINAGE (US)
— S — S —	BURIED SANITARY DRAINAGE (S)
— UST — UST —	UNBURIED STORM DRAINAGE (UST)
— ST — ST —	BURIED STORM DRAINAGE (ST)
	PIPE UP, BRANCH DROPPING FROM TEE, PIPE DOWN
	PIPE BREAK/CONTINUATION
XD	FLOOR (F), ROOF (R), HUB (H), FUNNEL (FF), AREA (A) DRAIN
	BALL VALVE
	CHECK VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE (PRV)
	REDUCER
	STRAINER
	UNION
P	PRESSURE GAUGE WITH PETCOCK
— S —I CO	CLEAN OUT – EXPOSED
— S —O CO	CLEAN OUT – IN FLOOR
	SANITARY TRAP
WC-1	EQUIPMENT/FIXTURE TAG

NO.	REVISION	DATE	BY	APPROVED
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2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL PLUMBING SECOND FLOOR LAYOUT

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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO. 115147
DRAWN BY:	B.C.A	DRAWING NO. M1.3
DESIGN BY:	B.C.A/G.V.W.O.	
CHECKED BY:	G.V.W.O.	CAD FILE: 115147 M PLOT DATE: 12/20/16 SUBMISSION: PERMIT
DATE:	DECEMBER 2016	

NOT TO SCALE

NOTE:
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CORPORATION OF THE CITY OF OSHAWA
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FEB 02 2017
PER: CHIEF BUILDING OFFICIAL

BUILDING PERMIT #
201602195
CITY OF OSHAWA

* sprinkler/standpipe hydraulic calculations & shop dwg's to be provided for review

NOTE:
ALL ACCESS PANELS ARE TO BE LOCKABLE TYPE

NOTE:
COORDINATE ACCESS DOORS/PANELS FOR ISOLATION VALVES AND CLEANOUTS WITH GENERAL CONTRACTOR

NOTE:
COORDINATE SHARED SPACES WITH GAS PIPING, HVAC DUCTWORK AND SPRINKLER PIPING.

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN CONFORMANCE WITH PART 6 OF THE ONTARIO FIRE CODE.

NOTE:
CONTRACTOR TO ENSURE ADEQUATE SLOPE IS AVAILABLE. FOR NEW SANITARY AND STORM SYSTEMS. COORDINATE EXACT TIE IN LOCATIONS ON SITE.

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INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN CONFORMANCE WITH PART 6 OF THE ONTARIO FIRE CODE.

STANDPIPE SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.9. & NFPA 14-2010

SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.5. & NFPA 13-2013

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PER: CHIEF BUILDING OFFICIAL

NOTE:
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NOTE:
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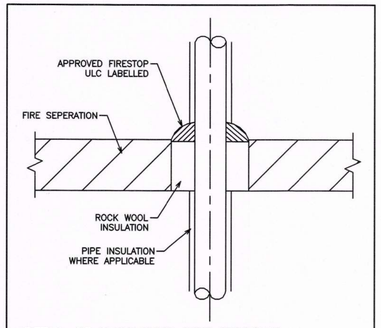

DETAIL OF SUGGESTED FIRE STOPPING
NTS

PLUMBING LEGEND	
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
US	UNBURIED SANITARY DRAINAGE (US)
S	BURIED SANITARY DRAINAGE (S)
UST	UNBURIED STORM DRAINAGE (UST)
ST	BURIED STORM DRAINAGE (ST)
HD	PIPE UP, BRANCH DROPPING FROM TEE, PIPE DOWN
	PIPE BREAK/CONTINUATION
XD	FLOOR (F), ROOF (R), HUB (H), FUNNEL (FF), AREA (A) DRAIN
	BALL VALVE
	CHECK VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE (PRV)
	REDUCER
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P	PRESSURE GAUGE WITH PETCOCK
CO	CLEAN OUT – EXPOSED
CO	CLEAN OUT – IN FLOOR
	SANITARY TRAP
WC–1	EQUIPMENT/FIXTURE TAG

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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL PLUMBING THIRD FLOOR LAYOUT

D.G. Biddle & Associates Limited
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96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M1.4
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOTE:
ALL ACCESS PANELS ARE TO BE LOCKABLE TYPE

NOTE:
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NOTE:
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NOTE:
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NOTE:
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TRUE COPY OF PERMIT PLANS
FEB 02 2017
PER: CHIEF BUILDING OFFICIAL

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOT TO SCALE

NOTE:
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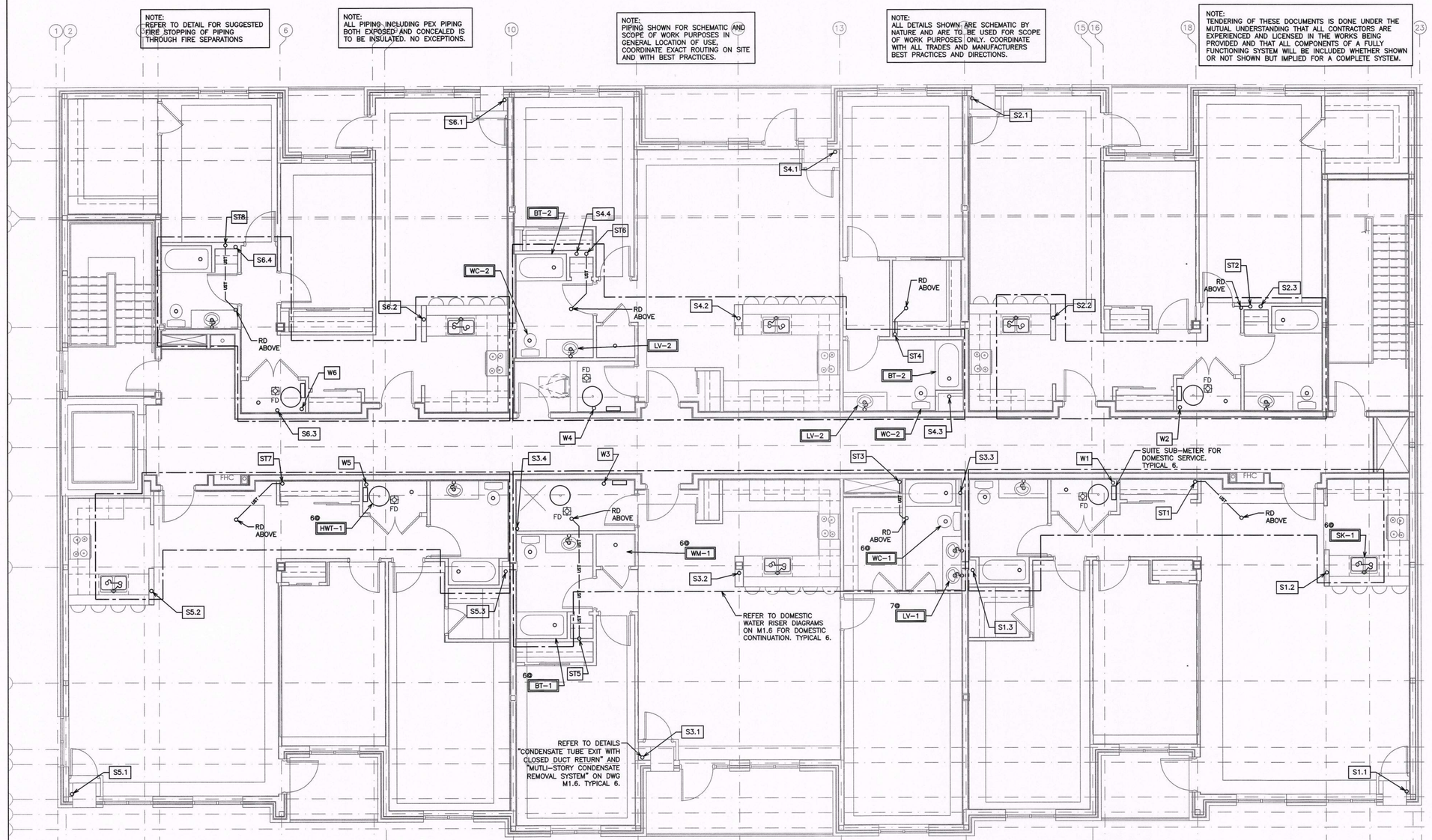

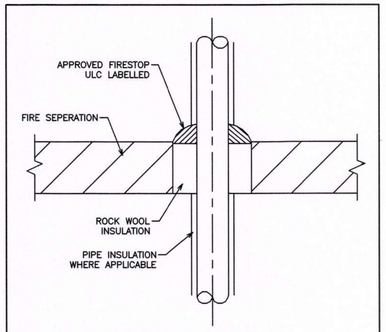

DETAIL OF SUGGESTED FIRE STOPPING
NTS

PLUMBING LEGEND	
—— - —— - ——	DOMESTIC COLD WATER (DCW)
—— — —— — ——	DOMESTIC HOT WATER (DHW)
—— US —— US ——	UNBURIED SANITARY DRAINAGE (US)
—— S —— S ——	BURIED SANITARY DRAINAGE (S)
—— UST —— UST ——	UNBURIED STORM DRAINAGE (UST)
—— ST —— ST ——	BURIED STORM DRAINAGE (ST)
—o— —o— —o	PIPE UP, BRANCH DROPPING FROM TEE, PIPE DOWN
~	PIPE BREAK/CONTINUATION
XD	FLOOR (F), ROOF (R), HUB (H), FUNNEL (FF), AREA (A) DRAIN
	BALL VALVE
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	PRESSURE REDUCING VALVE (PRV)
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WC–1	EQUIPMENT/FIXTURE TAG

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BUILDING PERMIT #
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CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
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FEB 02 2017
PER: CHIEF BUILDING OFFICIAL

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REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL PLUMBING FOURTH FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8800 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M1.5
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
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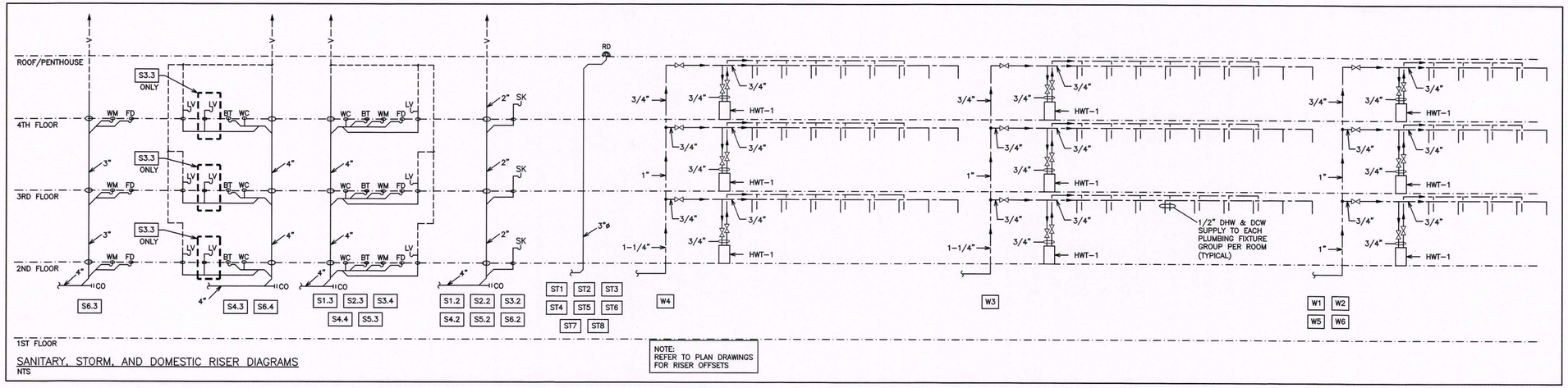
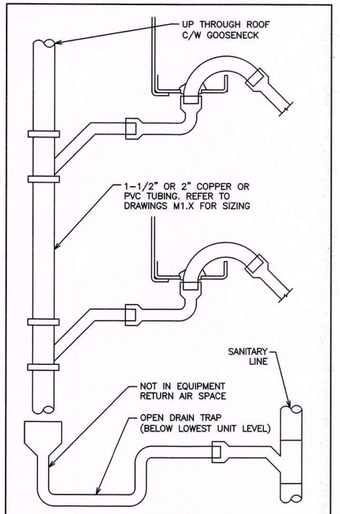
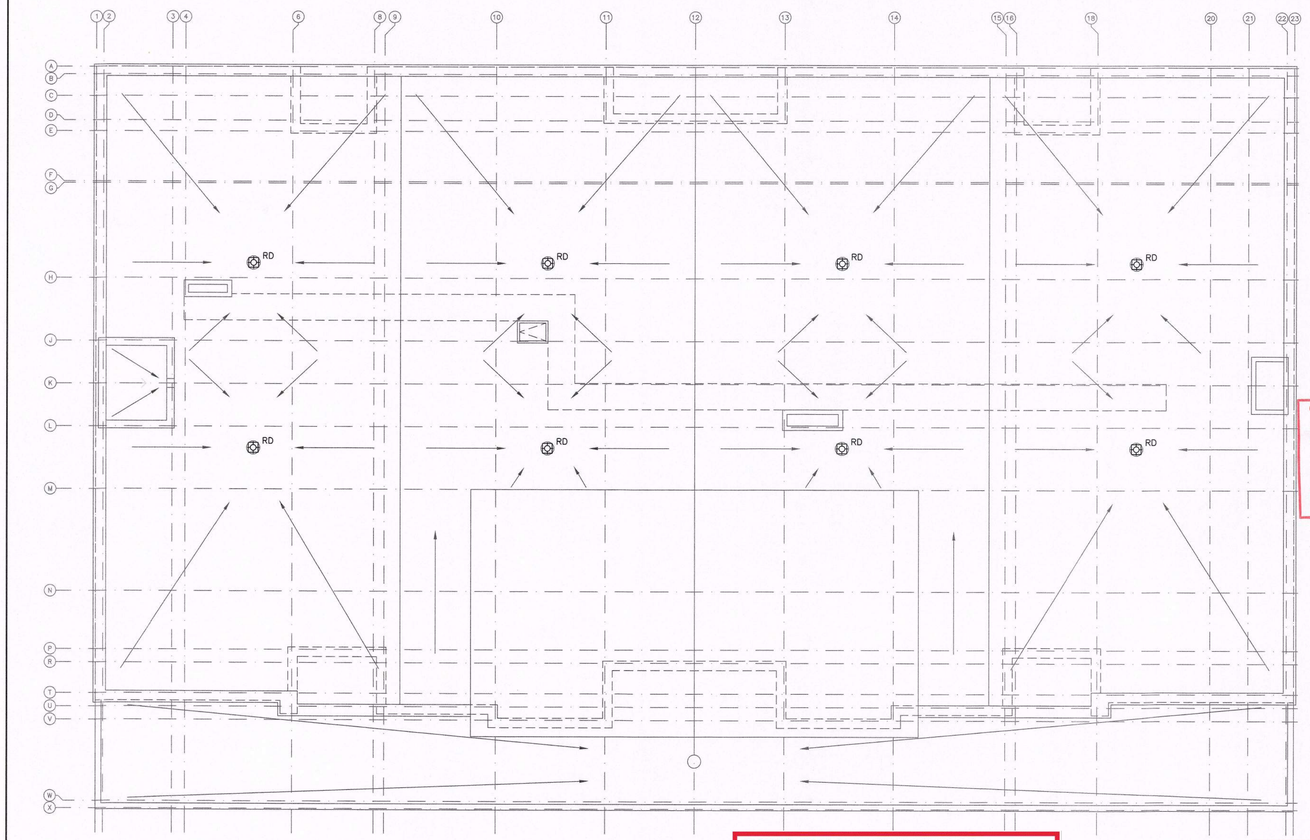


SANITARY, STORM, AND DOMESTIC RISER DIAGRAMS
NTS

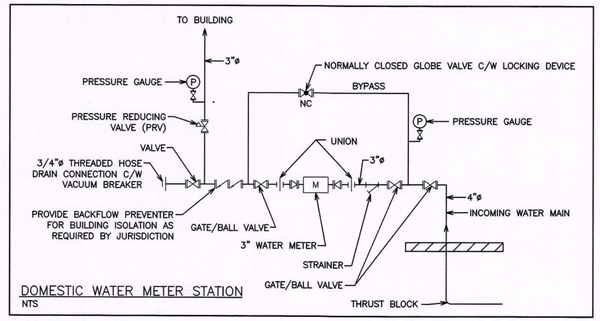
NOTE:
REFER TO PLAN DRAWINGS FOR RISER OFFSETS



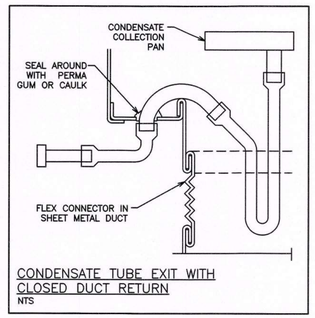
MULTI-STORY CONDENSATE REMOVAL SYSTEM
NTS



OBC DIV B. 7.4.10.4.
ROOFS WITH A PARAPET MORE THAN 150MM HIGH WILL REQUIRE A MINIMUM OF 2 ROOF DRAINS AND EMERGENCY OVERFLOW OR SCUPPERS SPACED NOT MORE THAT 30M APART ALONG THE PERIMETER OF THE BUILDING.



DOMESTIC WATER METER STATION
NTS



CONDENSATE TUBE EXIT WITH CLOSED DUCT RETURN
NTS

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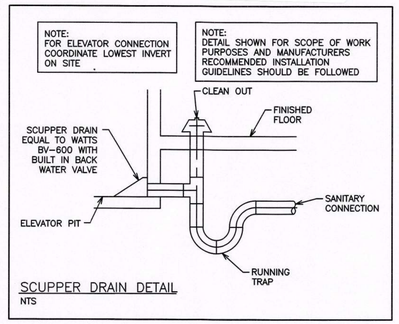
Backflow prevention devices to protect a *potable water system* from contamination shall be selected, installed and field tested in accordance with CAN/CSA-B64.10, "Backflow Prevention Devices - Selection, Installation, Maintenance and Field Testing.



SCUPPER DRAIN DETAIL
NTS

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL PLUMBING ROOF & NOTES

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	1/8" = 1'
DRAWN BY:	B.C.A
DESIGN BY:	B.C.A/G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016
PROJECT NO.	115147
DRAWING NO.	M1.6
CAD FILE:	115147 M
PLOT DATE:	12/20/16
SUBMISSION:	PERMIT

NOT TO SCALE

GENERAL REQUIREMENTS FOR MECHANICAL WORK

1. SCOPE OF WORK
 1.1. CONFORM TO THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT.
 1.2. THE GENERAL MECHANICAL SPECIFICATIONS SHALL APPLY TO AND BE PART OF EACH OF THE SECTIONS COVERING THE MECHANICAL TRADES WORK.
 1.3. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE O.B.C., ALL OTHER APPLICABLE CODES, REGULATIONS, BY-LAWS AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATIONS OF THE AUTHORITIES HAVING JURISDICTION. THESE CODES AND STANDARDS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.

2. EXAMINATION OF SITE AND INFORMATION
 2.1. EACH SUBCONTRACTOR, BEFORE PRICING, SHALL EXAMINE THE SITE, THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND THEY SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT THEIR TENDER MAY INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK.

3. RELATIONSHIP TO OTHER TRADES
 3.1. THIS SUBCONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS INSTALLING EQUIPMENT, PIPING, OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR INSTALLATION, AND THEY SHALL ARRANGE THEIR EQUIPMENT, PIPING, ETC., IN PROPER RELATION WITH OTHER APPARATUS, AND WITH THE BUILDING CONSTRUCTION. THIS SUBCONTRACTOR SHALL ALSO CONFIRM THE ELECTRICAL CHARACTERISTICS OF THE PROJECT AND ORDER EQUIPMENT ACCORDINGLY.
 3.2. SPECIAL CARE SHALL BE TAKEN IN THE INSTALLATION OF ALL WORK, TO SEE THAT THEY ALL COME WITHIN THE LIMITS ESTABLISHED BY THE FINISH LINES OF ALL WALLS, FLOORS, CEILINGS, ETC.
 3.3. THIS SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AND OTHER SUBCONTRACTORS WHO ARE CONCERNED, OF ALL OPENINGS, FOUNDATION WORK, HANGERS, INSERTS, ANCHORS, OR OTHER PROVISIONS NECESSARY IN THEIR WORK FOR THE INSTALLATION OF THE SUBCONTRACTORS WORK, AND THEY SHALL FURNISH ALL INFORMATION AND NECESSARY MATERIALS IN AMPLE TIME SO THAT PROPER PROVISIONS CAN BE MADE FOR SAME, AND SHALL SUPPLY AND CORRECTLY AND ACCURATELY PLACE ALL INSERTS, SLEEVES, ANCHORS, ETC.
 3.4. FAILURE TO COMPLY WITH THESE REQUIREMENTS ON THE PART OF THIS SUBCONTRACTOR WILL RENDER THEM RESPONSIBLE FOR THE COST OF CUTTING OPENINGS, INSTALLING HANGERS AND OTHER PROVISIONS AT A LATER DATE, AND THE SUBSEQUENT PATCHING, ETC., THEREBY REQUIRED.
 3.5. NO CUTTING SHALL BE DONE WITHOUT PERMISSION. ALL SUCH WORK SHALL BE DONE BY TRADES—PERSONS SKILLED IN AND CERTIFIED FOR THIS PARTICULAR TRADE.
 3.6. EACH SUBCONTRACTOR IS TO BE AN EXPERT IN THEIR TRADE.

4. REQUIREMENTS OF INSPECTION DEPARTMENTS
 4.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ELECTRICAL EQUIPMENT SUPPLIED MUST CONFORM TO THE REGULATIONS OF CSA AND THE LOCAL UTILITY. ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNERS IF IT REASONABLY COULD HAVE BEEN FORESEEN WHEN TENDERING.
 4.2. EACH SUBCONTRACTOR SHALL PREPARE DRAWINGS IN ADDITION TO ENGINEER'S DRAWINGS AS MAY BE REQUIRED BY VARIOUS INSPECTION DEPARTMENTS HAVING JURISDICTION, AND OBTAIN THEIR APPROVAL BEFORE PROCEEDING WITH THE WORK.
 4.3. IN THE EVENT THAT THE INSPECTION DEPARTMENT'S REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT, THE SUBCONTRACTOR SHALL CONSULT ENGINEER BEFORE PROCEEDING WITH THE SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWINGS ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.

5. CERTIFICATES, PERMITS, FEES
 5.1. SUBCONTRACTORS SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES INCLUDING PAYMENT FOR STREET CONNECTIONS TO STORM, SANITARY, WATER AND GAS IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT AND THEY SHALL FURNISH ANY CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE MUNICIPALITY AND PROVINCE.

6. GUARANTEE
 6.1. THIS SUBCONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND TYPE OBTAINABLE TO GIVE FIRST—CLASS CONSTRUCTION AND PROPER EFFICIENT OPERATION, AND FREE FROM ANY DEFECTS. ANY SUCH DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF THEIR WORK, SHALL BE REPAIRED AND REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. WHERE SUCH DEFECTS OCCUR, THIS SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING THE DEFECTIVE WORK GOOD. THIS SHALL NOT OBSOLETE ANY LONGER WARRANTIES ON SPECIFIC ITEMS OF EQUIPMENT.
 6.2. ALL INJURIES TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES OR OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT, CAUSED BY SUCH DEFECTS OF THIS SUBCONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENT AND REPAIR, SHALL BE MADE GOOD AT THE EXPENSE OF THIS SUBCONTRACTOR. ALL REPAIR WORK SHALL BE DONE BY TRADES RESPONSIBLE FOR THE ORIGINAL WORK.

7. DRAWINGS
 7.1. THE DRAWINGS SHOW THE APPROXIMATE LOCATION FOR SPECIAL APPARATUS AND THE MATERIALS THROUGHOUT THE BUILDING. THE ARRANGEMENT SHOWN ON THE DRAWING IS MORE OR LESS DIAGRAMMATIC AND AS SUCH APPROXIMATE ONLY, AND MAY BE ALTERED, AS APPROVED BY THE ENGINEER, TO MEET REQUIREMENTS OF THE APPARATUS, ETC., AND OF THE BUILDING. EACH SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MEASUREMENTS FOR THEIR WORK THROUGHOUT, AND THEY SHALL ARRANGE THEIR PIPING, WIRING AND APPARATUS TO CONFORM TO THE ARCHITECTURAL AND STRUCTURAL DETAILS IN A SATISFACTORY MANNER AND SHALL CO-OPERATE WITH OTHER CONTRACTORS TO ENSURE THAT WORK SHALL MEET ALL REQUIREMENTS OF DIVERSE CONTRACTS.
 7.2. ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED BUT NOT SHOWN SHALL BE INCLUDED.
 7.3. ITEMS OBVIOUSLY REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM BUT NOT SPECIFIED NOR SHOWN SHALL BE INCLUDED.

8. RESPONSIBILITY AND LIABILITY
 8.1. EACH SUBCONTRACTOR SHALL SUPERVISE THE LAYING OUT OF THEIR WORK AND SHALL ARRANGE IT IN CO—OPERATION WITH OTHER WHO MAY BE WORKING ON THE PREMISES WHILE THE WORK OF THIS CONTRACT IS IN PROGRESS. THEY SHALL PROTECT FINISHED AND UNFINISHED WORK OF THIS CONTRACT AND/OR WORK OF OTHERS ON THE PREMISES UNTIL THE COMPLETED WORK HAS BEEN ACCEPTED.
 8.2. THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND IN THE DRAWINGS OR SPECIFICATIONS BEFORE SUBMITTING THEIR TENDER. THEY SHALL ABIDE BY DECISIONS GIVEN TO THEM IN WRITING WITH REGARD TO SAME. EACH SUBCONTRACTOR IS CAUTIONED THAT THE WORK AS SHOWN IS INTENDED TO BE COMPLETE IN ALL RESPECTS AND THAT FAILURE ON THEIR PART TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.

9. CLEAN—UP
 9.1. DURING THE COURSE OF CONSTRUCTION, EACH SUBCONTRACTOR SHALL KEEP THEIR WORK TIDY AND NOT ALLOW AN ACCUMULATION OF DEBRIS RESULTING FROM THEIR WORK.
 9.2. UPON COMPLETION OF THEIR WORK THEY SHALL LEAVE THE PREMISES IN A BROOM—CLEAN CONDITION.

10. PROTECTION
 10.1. SUBCONTRACTORS ARE TO PROTECT THEIR WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT AND FIXTURES TO PREVENT OBSTRUCTIONS.

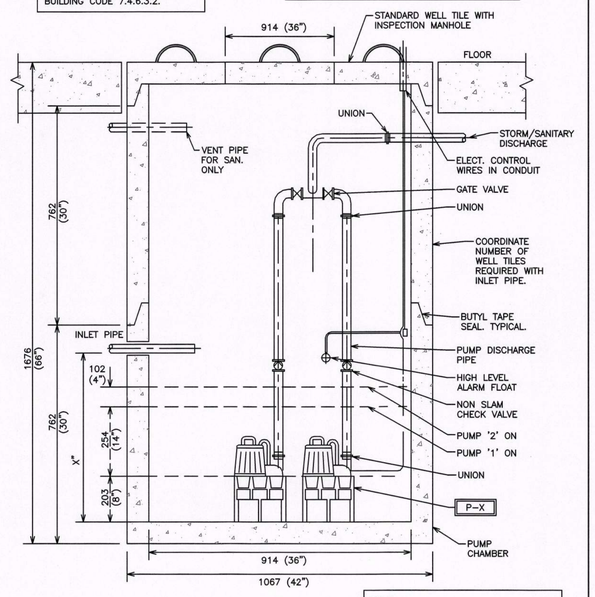
11. ELECTRICAL WIRING AND CONTROLS
 11.1. ALL POWER WIRING FOR MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL DIVISION. THE MECHANICAL TRADE INVOLVED SHALL PROVIDE STARTERS, THERMOSTATS, VALVES, CONTROL TRANSFORMERS, RELAYS, ETC. ALL CONTROL WIRING SHALL BE DONE BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED ELSEWHERE IN THIS SPECIFICATION.

STORM/SANITARY PUMP SCHEDULE

TAG	MANUFACTURER	MODEL	FLOW	PRESSURE	ELECTRICAL	PUMP CHAMBER	ACCESSORIES & NOTES
P–1	SCARBORO PUMP	OSP50	40gpm	16 FEET	120V/1PH	CHAMBER + 30"/18" TILE(S)	DUPLEX C/W CONTROLLER
P–2	SCARBORO PUMP	SP40	55gpm	20 FEET	120V/1PH	CHAMBER + 30"/18" TILE(S)	DUPLEX C/W CONTROLLER
PUMP CHAMBER : ARMTEC BROOKLIN – 36"ø PUMP CHAMBER W/ 30" WELL TILES & 18" HALF TILES AVAILABLE							

NOTE:
SUMP PIT SHALL BE COMPLETELY WATER–TIGHT, AIR TIGHT AND VENTED AS PER ONTARIO BUILDING CODE 7.4.6.3.2.

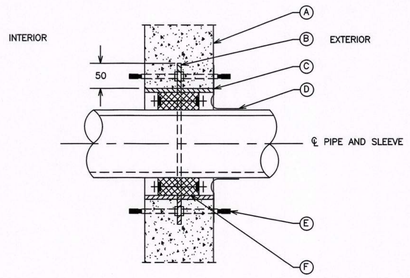
NOTE:
DETAIL SHOWN FOR SCOPE OF WORK PURPOSES AND MANUFACTURERS RECOMMENDED INSTALLATION GUIDELINES SHOULD BE FOLLOWED



NOTE:
FOR ELEVATOR CONNECTION COORDINATE LOWEST INVERT ON SITE

TYPICAL DUPLEX SUBMERSIBLE SUMP PUMP
NTS

ITEM	DESCRIPTION
A.	EXTERIOR WALL
B.	WATER STOP AND ANCHOR COLLAR
C.	LINK–SEAL TYPE WALL SLEEVE MODEL WS OR CORE BIT DRILL WALL OPENING. DIA. AS REQ'D TO ACCEPT LINK SEAL ASSEMBLY
D.	EXTERIOR SURFACE OF SLEEVE, SEAL AND PIPE SHOULD BE COATED WITH COAL TAR OR OTHER WATERPROOFING MATERIAL
E.	25 DIA. GALVANIZED THREADED RODS FOR STRAPPING WATER MAINS. COORDINATE SPACING WITH FLANGERS AND SOCKET CLAMPS USED FOR TIE RODS
F.	LINK–SEAL TYPE WALL PENETRATION SEAL MODEL –LS– MODULAR MECHANICAL SYNTHETIC RUBBER SEAL



NOTES:

1. THE PIPE TO WALL PENETRATION CLOSURE SHALL BE "LINK–SEAL". SEALS SHALL BE MODULAR MECHANICAL TYPE, CONSISTING OF INTERLOCKING SYNTHETIC RUBBER LINK SHAPED TO CONTINUOUSLY FILL THE ANNULAR SPACE BETWEEN PIPE AND WALL OPENING. EACH LINK SHALL BE PROVIDED WITH PRESSURE PLATE UNDER EACH BOLT HEAD AND NUT. TIGHTENING OF BOLTS SHALL CAUSE THE RUBBER SEALING ELEMENTS TO EXPAND AND PROVIDE AN ABSOLUTELY WATERTIGHT SEAL BETWEEN PIPE AND WALL OPENING.

PIPE PENETRATION THROUGH EXTERIOR WALL
NTS

PLUMBING EQUIPMENT SCHEDULE

WC–1 – FLOOR MOUNTED TOILET – VITREOUS CHINA – TANK TYPE
American Standard Cadet Pro Right Height Elongated #215AA.104.020 Toilet, 419 mm high, white vitreous china with EverClean antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, Floor Mounted, cadet flushing system with PowerWash rim siphon flushing system which scrubs bowl with every flush, 4.8 L (1.28 US Gal) per flush, raised sanitary bar and four (4) points tank stabilization, 229 mm x 203 mm (9" x 8") water surface, two (2) piece, 'Speed Connect' tank assembly, unlined tank, oversized 76 mm (3") flush valve with flapper, Metal shank fill valve, 305 mm (12") rough–in, elongated bowl, 54 mm (2–1/8") fully glazed internal trapway, floor outlet, bolt caps.
Centoco #800STS.001 Toilet Seat, extra heavy duty, for elongated bowl closed front, white solid plastic, with cover, stainless steel check hinges, metal flat washers stainless steel posts and nuts. McGuire #LFH172BV, Toilet Supply, chrome plated finish polished brass, commercial duty 1/4 turn ball valve angle stops, 13 mm (1/2") I.D. inlet x 127 mm (5") long rigid horizontal integral copper sweat tube nipples, combination V.P. Loose key handles, escutcheon and flexible copper risers. Provide Floor Flange, (same material as the connecting pipe drain), with all brass bolts and with rubber gasket.

WC–2 – FLOOR MOUNTED TOILET – VITREOUS CHINA – TANK TYPE (BARRIER FREE)
American Standard Cadet Pro Right Height Elongated #215AA.104.020 Toilet, 419 mm high, white vitreous china with EverClean antimicrobial surface which inhibits the growth of stain and odor causing bacteria mold and mildew, Floor Mounted, cadet flushing system with PowerWash rim siphon flushing system which scrubs bowl with every flush, 4.8 L (1.28 US Gal) per flush, raised sanitary bar and four (4) points tank stabilization, 229 mm x 203 mm (9" x 8") water surface, two (2) piece, 'Speed Connect' tank assembly, unlined tank, oversized 76 mm (3") flush valve with flapper, Metal shank fill valve, 305 mm (12") rough–in, elongated bowl, 54 mm (2–1/8") fully glazed internal trapway, floor outlet, bolt caps.
Provide bolted tank cover if required – to meet local codes. Provide trip lever on open side of Toilet (wide side) if required – to meet local codes.Centoco #820STS.001 Toilet Seat, extra heavy duty, for elongated bowl, open front, white solid plastic, with cover, stainless steel check hinges, metal flat washers stainless steel posts and nuts. McGuire #LFH172BV, Toilet Supply, chrome plated finish polished brass, commercial duty 1/4 turn ball valve angle stops, 13 mm (1/2") I.D. inlet x 127 mm (5") long rigid horizontal integral copper sweat tube nipples, combination V.P. Loose key handles, escutcheon and flexible copper risers. Provide Floor Flange, (same material as the connecting pipe drain), with all brass bolts and with rubber gasket.

LV–1 – COUNTER MOUNTED SELF–RIMMING / DROP–IN BASIN – SINGLE HANDLE FAUCET BELOW DECK MECHANICAL WATER MIXING VALVE
American Standard Cadet Universal Access #9494.001 basin, 3 holes, 4" (102 mm) center, 533 mm x 445 mm x 175 mm (21" x 17–1/2" x 6–7/8") high, oval, vitreous china, Self–rimming / Drop–in, side rear overflow, faucet ledge. Provide basin rim sealant. Chicago Faucets #420–ABCP Single Handle Faucet, chrome plated finish, 4" (102 mm) centerset, ECAST construction lead free (equal or less than 0.25%) cast brass body, ceramic 1/4 turn cartridge, 5.7 LPM (1.5 GPM) non–aerating laminar flow outlet, 131 mm (5–3/16") projection reach, lever handle, volume control, adjustable hot limit safety stop. Lawler #TMM–1070, Below Deck Mechanical Water Mixing Valve, bronze body, temperature adjusting dial, 10 mm (3/8") inlets and outlet compression fittings, high temperature thermostatic limit stop, shut–off with automatic reset when temperature exceeds 120 °F (48.8 °C), integral checks, offer temperature range from full cold through 46 °C (114.8 °F). Provide tee, adaptors and flex. copper tubing to suit installation. Provide tempered water to hot side of faucet. McGuire #155A Open Grid Drain, cast brass one piece top, 17 GA. (1.5 mm) tubular 32 mm (1–1/4") tailpiece. McGuire #LFH170BV, Faucet Supplies, chrome plated finish polished brass, commercial duty 1/4 turn ball valve angle stops, 13 mm (1/2") I.D. inlet x 127 mm (5") horizontal extension tubes, combination V.P. Loose key handles, escutcheon and flexible copper risers. McGuire #8872C P–Trap, heavy cast brass adjustable body, with slip nut, 32 mm (1–1/4") size, shallow wall flange and seamless tubular wall bend.

LV–2 – COUNTER MOUNTED SELF–RIMMING / DROP–IN BASIN – SINGLE HANDLE FAUCET BELOW DECK MECHANICAL WATER MIXING VALVE (BARRIER FREE)
American Standard Cadet Universal Access #9494.001 basin, 3 holes, 4" (102 mm) center, 533 mm x 445 mm x 175 mm (21" x 17–1/2" x 6–7/8") high, oval, vitreous china, Self–rimming / Drop–in, side rear overflow, faucet ledge. Provide basin rim sealant. Chicago Faucets #420–ABCP Single Handle Faucet, chrome plated finish, 4" (102 mm) centerset, ECAST construction lead free (equal or less than 0.25%) cast brass body, ceramic 1/4 turn cartridge, 5.7 LPM (1.5 GPM) non–aerating laminar flow outlet, 131 mm (5–3/16") projection reach, lever handle, volume control, adjustable hot limit safety stop. Lawler #TMM–1070, Below Deck Mechanical Water Mixing Valve, bronze body, temperature adjusting dial, 10 mm (3/8") inlets and outlet compression fittings, high temperature thermostatic limit stop, shut–off with automatic reset when temperature exceeds 120 °F (48.8 °C), integral checks, offer temperature range from full cold through 46 °C (114.8 °F). Provide tee, adaptors and flex. copper tubing to suit installation. Provide tempered water to hot side of faucet. McGuire #155WC Offset Open Grid Drain, cast brass one piece top, 17 GA. (1.5 mm) mm tubular 32 mm (1–1/4") tailpiece. McGuire #LFH170BV, Faucet Supplies, chrome plated finish polished brass, commercial duty 1/4 turn ball valve angle stops, 13 mm (1/2") I.D. Inlet x 127 mm (5") horizontal extension tubes, combination V.P. Loose key handles, escutcheon and flexible copper risers. McGuire #8872C P–Trap, heavy cast brass adjustable body, with slip nut, 32 mm (1–1/4") size, shallow wall flange and seamless tubular wall bend. McGuire PROWRAP #PW2000WC Sanitary Covering vandal–resistant, flexible seamless moulded closed–cell PVC resin, formulated with anti–microbial additive to limit the growth of fungus and bacteria, to exposed piping (to protect against heat/contusions) as per local codes.

SK–1 – COUNTERTOP MOUNT SINK – SINGLE HANDLE FAUCET
Franke Commercial #LBD6408–1/3 Double Bowl Countertop Mount Sink, 3 holes, 8" (203 mm) center, 794 mm (31–1/4") wide x 521 mm (20–1/2") long x 203 mm (8") high deep, spillway, counter mounted, backledge, grade 18–10 20 GA. (0.9 mm) type 302 stainless steel, self–rimming, satin finish rim and bowls, mounting kit provided, fully undercoated to reduce condensation and resonance, factory applied rim seal, 3–1/2" (89 mm) crumb cup waste assembly with 1–1/2" (38 mm) tailpiece.
American Standard Reliant+ #4205.104MOD.075 Single Handle Faucet, stainless steel finish, 8" (203 mm) centerset, washerless ceramic disc cartridge, 8.3 LPM (2.2 GPM) regulator, swing spout, 232 mm (9–1/8") projection reach, lever handle, deluxe pull–out spray with adjustable spray pattern and lock & turn activation button. McGuire #LFH170BV, Faucet Supplies, chrome plated finish polished brass, commercial duty 1/4 turn ball valve angle stops, 13 mm (1/2") I.D. inlet x 127 mm (5") horizontal extension tubes, combination V.P. Loose key handles, escutcheon and flexible copper risers. McGuire #8912CB P–Trap, heavy cast brass adjustable body, with slip nut, 38 mm (1–1/2") size, box flange and seamless tubular wall bend.

WM–1 – WASHING MACHINE
SPECIFICATIONS BY ARCHITECT, SUPPLIED/INSTALLED BY CONTRACTOR

BT–1 – BATH TUB
SPECIFICATIONS BY ARCHITECT, SUPPLIED/INSTALLED BY CONTRACTOR

BT–2 – BATH TUB (BARRIER FREE)
SPECIFICATIONS BY ARCHITECT, SUPPLIED/INSTALLED BY CONTRACTOR

DW–1 – DISHWASHER
SPECIFICATIONS BY ARCHITECT, SUPPLIED/INSTALLED BY CONTRACTOR

HYDRANT – NON–FREEZE WALL HYDRANT WITH NB BOX, INTEGRAL VACUUM BREAKER
Watts #HY–725 Hydrant non–freeze hydrant, all bronze head, seat casting and internal working parts, wall mount hydrant, concealed, bronze wall casing, chrome plated face, integral vacuum breaker, nickel bronze box and door, loose key, 3/4"Ø (19 mm) hose connection, 3/4"Ø (19 mm) female x 1"Ø (25 mm) male pipe connection.

BACKWATER VALVE – PIT DRAIN WITH BACK WATER VALVE
Watts #BV–600 Backwater Valve – epoxy coated, cast iron body, backwater valve with bronze seat and flapper, epoxy coated cast iron grate and frame, secured angle grate, no hub outlet.

ROOF DRAIN – LARGE CONVENTIONAL INSULATED ROOF
Watts #RD–100–5–B–D–E–L–K Roof Drain – epoxy coated, 14–1/8" (359 mm) diameter, cast iron body, flashing clamp and integral gravel stop, with self locking 12–3/8" (314 mm) diameter ductile iron dome, sump receiver,sediment bucket,vandal proof dome,adjustable extension,under deck clamp, no hub outlet.

FLOOR DRAIN – FINISHED AREA
Watts #FD–100–C–EG–50–7–6 Floor Drain – epoxy coated, cast iron body, reversible flashing clamp with primary and secondary weepholes, 5" (127 mm) diameter nickel bronze, adjustable round strainer, 4" x 9" (102 mm x 229 mm) oval cast iron funnel, vandal proof,trap primer connection with plug, no hub outlet.

FLOOR DRAIN – FINISHED AREA
Watts #FD–100–C–7–6–A5–1 Floor Drain – epoxy coated, cast iron body, reversible flashing clamp with primary and secondary weepholes, trap primer connection with plug,vandal proof, no hub outlet. Watts –A5–1 5" (127 mm) diameter, nickel bronze, adjustable round strainer.

ACCESS DOOR – UNIVERSAL FLUSH
Acudor UF–5000 6 x 6 SCPC Universal Flush, flush to frame door with rounded safety corners, carbon steel with prime coat baked enamel finish, 16 GA. (1.5 mm) up to 16" x 16"; 14 GA. (1.9 mm) over 16" x 16", 6" x 6" (152 mm x 152 mm), one piece frame outer flange welded to mounting frame, 18 GA. (1.2 mm) up to 16" x 16"; 16 GA. (1.5 mm) over 16" x 16", continuous, concealed hinge, stainless steel screwdriver operated cam latch.

ACCESS DOOR – FIRE–RATED INSULATED
Acudor FW–5050 8 x 8 WCPC fire–rated insulated, self–closing door filled with 2" (51 mm) thick fire rated insulation. ULC–2 hour "B" label. Carbon steel with prime coat baked enamel finish, 20 GA. (1.0 mm) door, 8" x 8" (203 mm x 203 mm), 16 GA. (1.5 mm) frame, concealed hinge, knurled knob and flush key, When master keying is required, doors can be prepared for mortise cylinder locks. For ceilings: Warnock Hersey International – 3 hours max size 24 x 36. For walls: UL–1–1/2 hour "B" label.

TRAP SEAL PRIMER
P.P.P. #PT–4 Trap Seal Primer serving four drains, activated by a 3/4" (19 mm) normally closed solenoid valve, designed to interface with low voltage energy management systems control, 3/4" (19 mm) diameter connection anti–siphon atmospheric vacuum breaker.

TRAP SEAL PRIMER
P.P.P. #PR01–500 Trap Seal Primer – lead–free brass body flow sensing activation with minimum flow rate of 0.5 GPM at 20 psig, 1/2" (13 mm) diameter connection equipped with vacuum breaker ports and internal backflow protection.

BACKFLOW PREVENTER – LEAD FREE – DOUBLE CHECK VALVE ASSEMBLY
Watts LF757–NRS LEAD FREE – Double Check Valve Assembly – two independent, removable and serviceable tri–link check modules within a single housing, drip tight closure against reverse flow, 304 schedule 40 stainless steel housing and sleeve, stainless steel springs, reversible elastomeric discs, sleeved access port, two drip tight shut–off valves non–rising stem gate valves, four lead free, bronze body, nickel plated test cocks.

CLEANOUT – STACK CLEANOUT WITH BRASS PLUG WITH STAINLESS STEEL COVER
Watts #CO–460–RD Cleanout, cast iron body, removable, gasketed, brass plug, round cover, access cover, stainless steel cover, no hub outlet.

CLEANOUT – FLOOR CLEANOUT
Watts #CO–200–R–1–6–34G Cleanout – epoxy coated, cast iron body, ABS plug with neoprene gasket, vandal proof, no hub outlet.

NOTE:
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BUILDING PERMIT #
201602195
CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
FEB 02 2017
PER: CHIEF BUILDING OFFICIAL

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

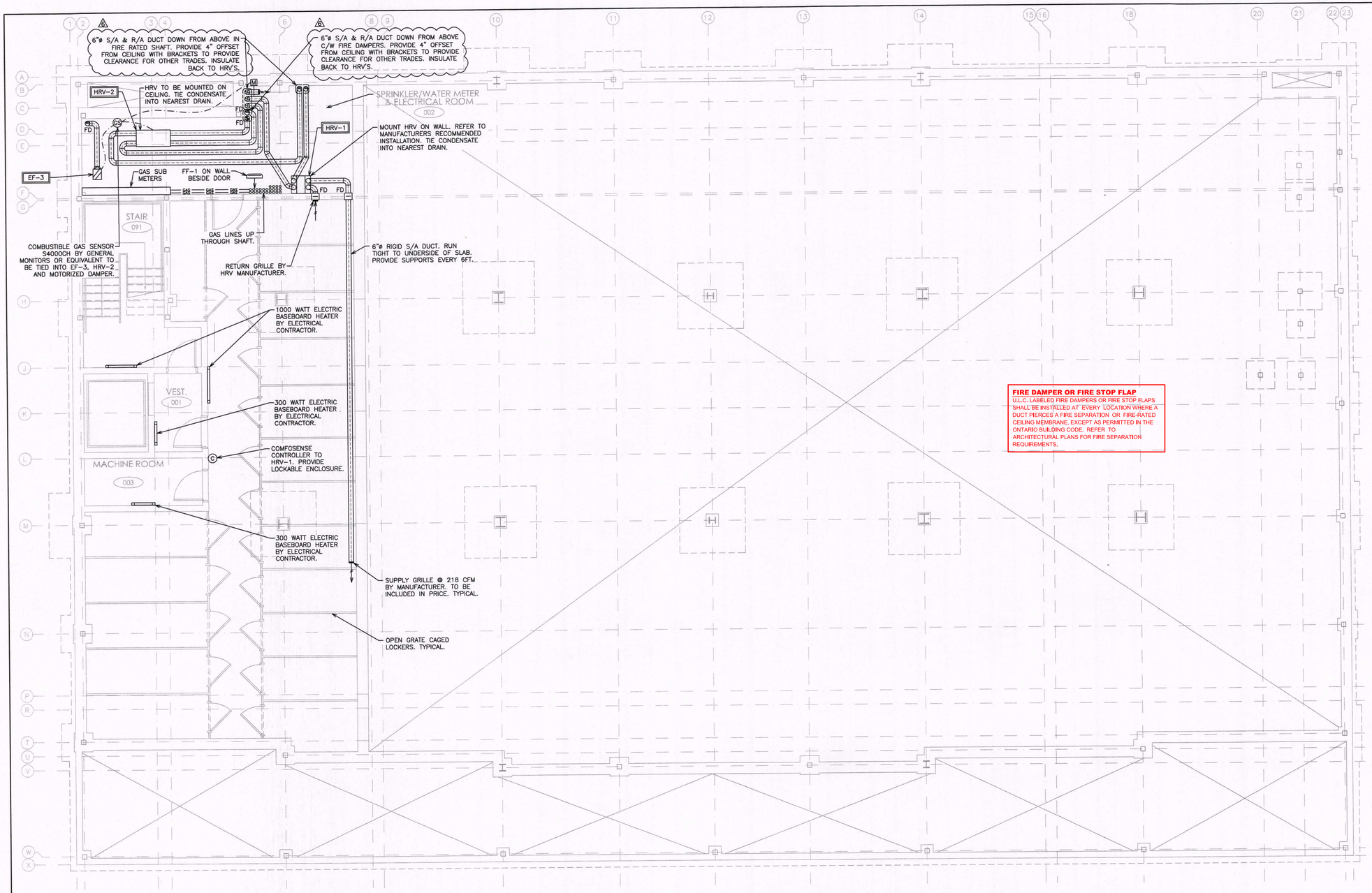
MECHANICAL PLUMBING NOTES & SCHEDULES

D.G.Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576–8500 • FAX (905)576–9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136345
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	1/8" = 1'
DRAWN BY:	B.C.A
DESIGN BY:	B.C.A/G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016
PROJECT NO.	115147
DRAWING NO.	M1.7
CAD FILE:	115147 M
PLOT DATE:	12/20/16
SUBMISSION:	PERMIT

NOT TO SCALE



FIRE DAMPER OR FIRE STOP FLAP

U.L.C. LABELED FIRE DAMPERS OR FIRE STOP FLAPS SHALL BE INSTALLED AT EVERY LOCATION WHERE A DUCT PIERCES A FIRE SEPARATION OR FIRE-RATED CEILING MEMBRANE, EXCEPT AS PERMITTED IN THE ONTARIO BUILDING CODE. REFER TO ARCHITECTURAL PLANS FOR FIRE SEPARATION REQUIREMENTS.

BUILDING PERMIT #
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CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
JUN 30 2017
PER: _____
CHIEF BUILDING OFFICIAL

BUILDING PERMITS & INSPECTION SERVICES
RECEIVED
JUN 28 2017
File _____
Responsibility _____

HVAC LEGEND	
	SUPPLY, RETURN AIR DUCT UP (ROUND)
	SUPPLY, RETURN AIR DUCT DOWN (ROUND)
	SIDE WALL GRILLE
HRV-1	EQUIPMENT/FIXTURE TAG
G	COMBUSTIBLE GAS SENSOR
C	COMFOSENSE CONTROLLER BY ZEHNDER
FD	FIRE DAMPER

NOTE:
CONTRACTOR TO PROVIDE MAINTENANCE CLEARANCES FOR OVERHEAD EQUIPMENT. REFER TO MANUFACTURERS RECOMMENDED CLEARANCES.

NOTE:
ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.

NOTE:
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NOTE:
COORDINATE ALL ADDITIONAL PROVISIONS INCLUDING, BUT NOT LIMITED TO; COMBUSTION AIR AND VENTILATION AIR WITH GENERAL CONTRACTOR DURING TENDER PERIOD.

NO.	REVISION	DATE	BY	APPROVED
6	RE-ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL HVAC BASEMENT LAYOUT

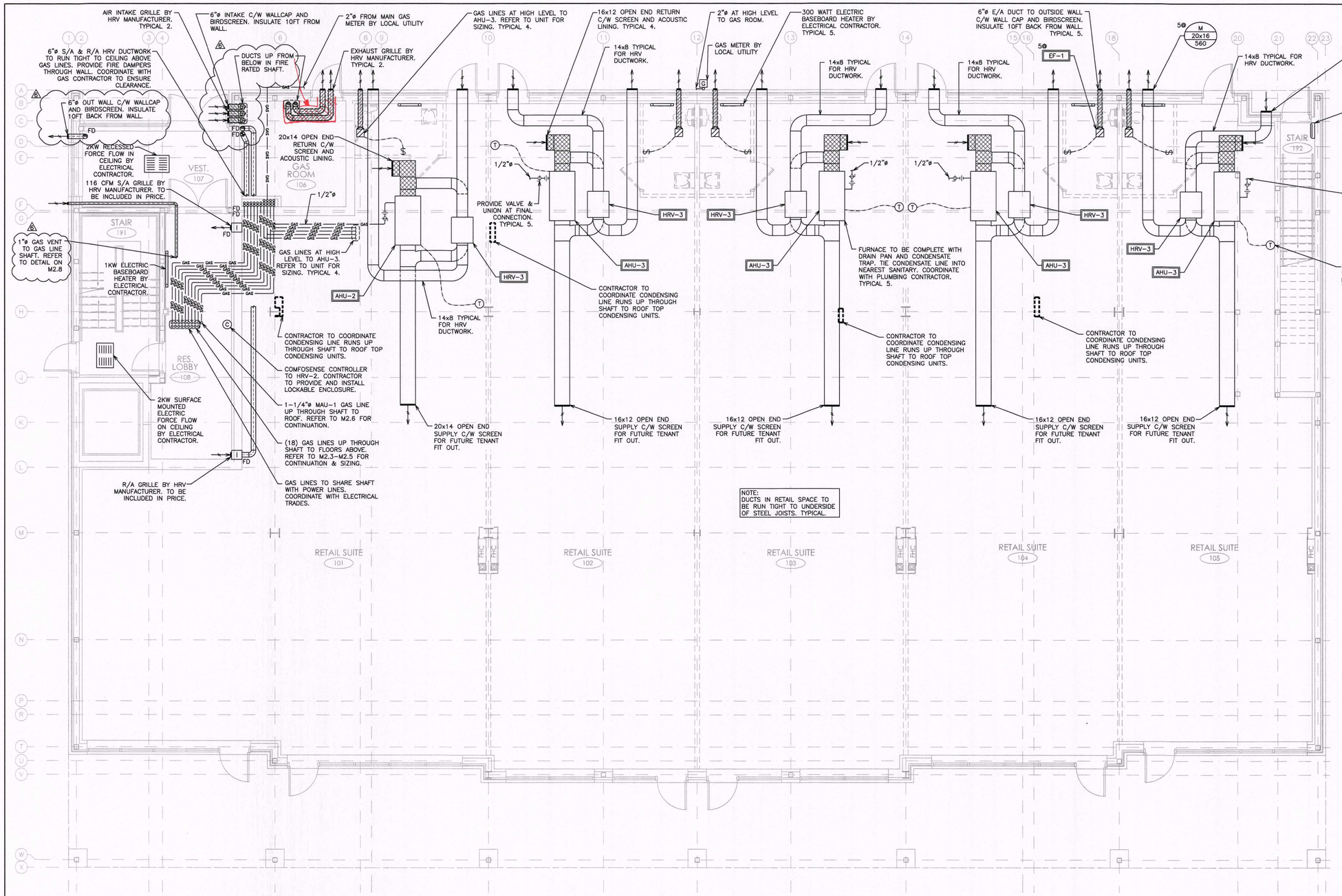
D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
June 27/17
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	J.T.C.
DESIGN BY:	J.T.C./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	JUNE 2017

PROJECT NO. 115147
DRAWING NO. M2.1
CAD FILE: 115147 M
PLOT DATE: 06/28/17
SUBMISSION: PERMIT

NOT TO SCALE



HVAC LEGEND	
	SUPPLY, RETURN AIR DUCT UP (RECT)
	SUPPLY, RETURN AIR DUCT DOWN (RECT)
	SUPPLY, RETURN AIR DUCT UP (ROUND)
	SUPPLY, RETURN AIR DUCT DOWN (ROUND)
	SUPPLY, RETURN, EXHAUST AIR GRILLE
	SIDE WALL GRILLE
QTY@ A B C	A- GRILLE/DIFFUSER TYPE B- DIFFUSER NECK SIZE/GRILLE SIZE C- AIR QUANTITY (CFM)
	SENSOR AND ASSOCIATED CONTROL WIRING
HRV-1	EQUIPMENT/FIXTURE TAG
	DIRECTION OF AIR FLOW
T	THERMOSTAT EQUAL TO HONEYWELL TB8220U: 7-DAY PROGRAMMABLE C/W AUTO CHANGEOVER
C	COMFOSENSE CONTROLLER BY ZEHNDER
	ACOUSTIC LINED DUCT
FD	FIRE DAMPER
GAS	GAS LINE
	GAS METER
	PIPE UP, PIPE DOWN
	SHUTOFF VALVE
	UNION
	PIPE BREAK/CONTINUATION

NOTE:
CONTRACTOR TO PROVIDE MAINTENANCE CLEARANCES FOR OVERHEAD EQUIPMENT. REFER TO MANUFACTURERS RECOMMENDED CLEARANCES.

NOTE:
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NOTE:
ALL DUCTWORK THAT PENETRATES AN OUTSIDE WALL TO BE INSULATED MIN 10FT BACK FROM OUTSIDE WALL.

NOTE:
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CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
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JUN 30 2017
PER:
CHIEF BUILDING OFFICIAL

NO.	REVISION	DATE	BY	APPROVED
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

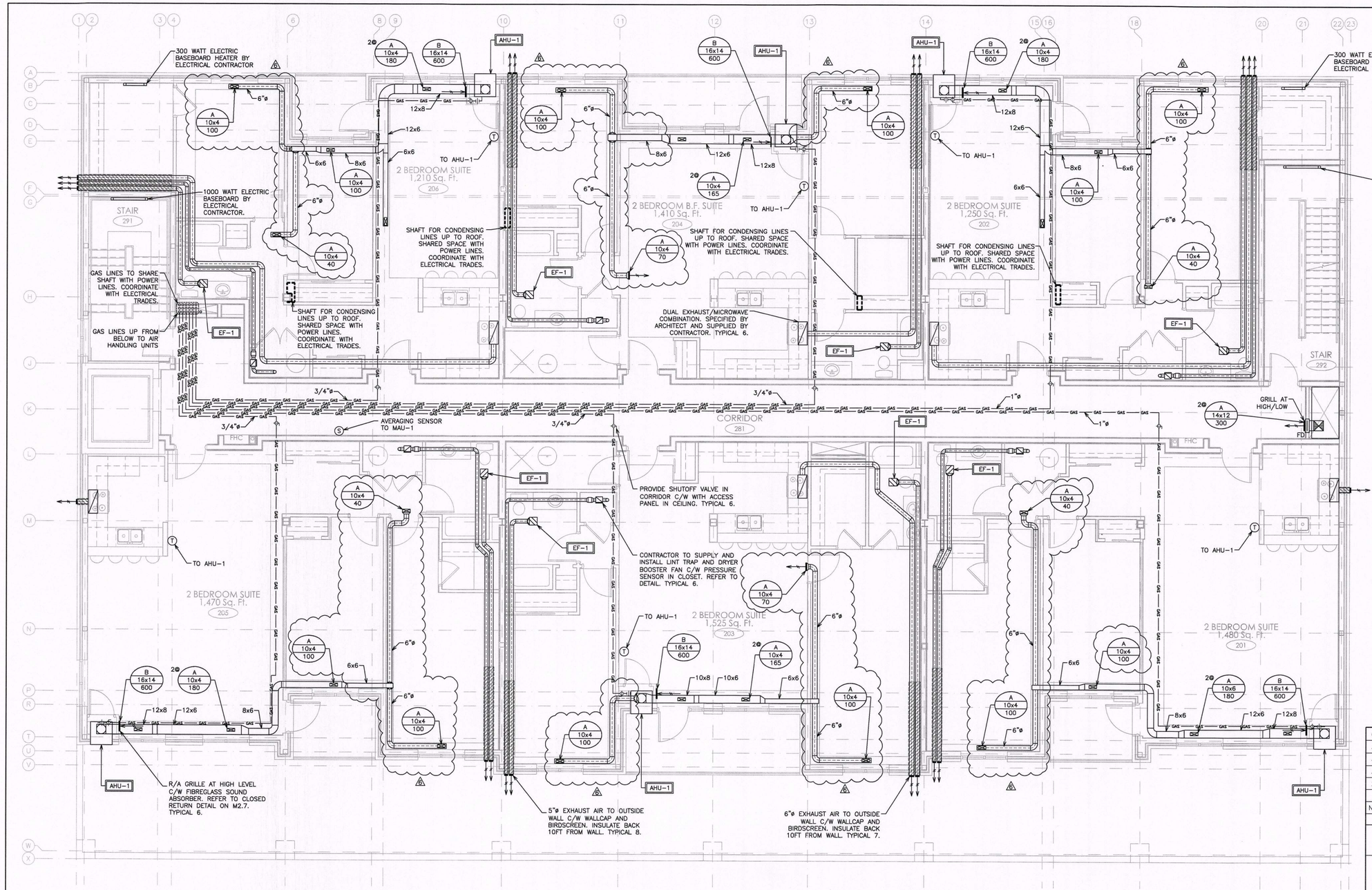
MECHANICAL HVAC MAIN FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST · OSHAWA,ON L1H 1B6
PHONE (905)576-8500 · FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
June 27/17
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	J.T.C.	DRAWING NO.	M2.2
DESIGN BY:	J.T.C./G.V.W.O.	CAD FILE:	115147 M
CHECKED BY:	G.V.W.O.	PLOT DATE:	06/28/17
DATE:	JUNE 2017	SUBMISSION:	PERMIT

NOT TO SCALE



RETURN AIR INLET FROM ANYROOM
PROVISIONS SHALL BE MADE FOR THE RETURN OF AIR FROM ANY ROOM OR SPACE WITHOUT A RETURN AIR INLET, BY LEAVING GAPS BENEATH DOORS, USING LOUVERED DOORS, OR INSTALLING RETURN AIR DUCT INLETS.

BUILDING PERMIT # 201602195 CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA TRUE COPY OF PERMIT PLANS JUN 30 2017 PER: CHIEF BUILDING OFFICIAL

HVAC LEGEND	
	SUPPLY, RETURN AIR DUCT UP (RECT)
	SUPPLY, RETURN AIR DUCT DOWN (RECT)
	SUPPLY, RETURN AIR DUCT UP (ROUND)
	SUPPLY, RETURN AIR DUCT DOWN (ROUND)
	SUPPLY, RETURN, EXHAUST AIR GRILLE
	SIDE WALL GRILLE
QTY@ A B C	A- GRILLE/DIFFUSER TYPE B- DIFFUSER NECK SIZE/GRILLE SIZE C- AIR QUANTITY (CFM)
	SENSOR AND ASSOCIATED CONTROL WIRING
HRV-1	EQUIPMENT/FIXTURE TAG
	DIRECTION OF AIR FLOW
T	THERMOSTAT EQUAL TO HONEYWELL TB8220U: 7-DAY PROGRAMMABLE C/W AUTO CHANGEOVER
FD	FIRE DAMPER
GAS	GAS LINE
	PIPE UP, PIPE DOWN
	SHUTOFF VALVE
	UNION
	PIPE BREAK/CONTINUATION

NOTE:
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NOTE:
ALL SUPPLY DUCTWORK RUNNING ALONG AN OUTSIDE WALL TO BE INSULATED.

NO.	REVISION	DATE	BY	APPROVED
6	RE-ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

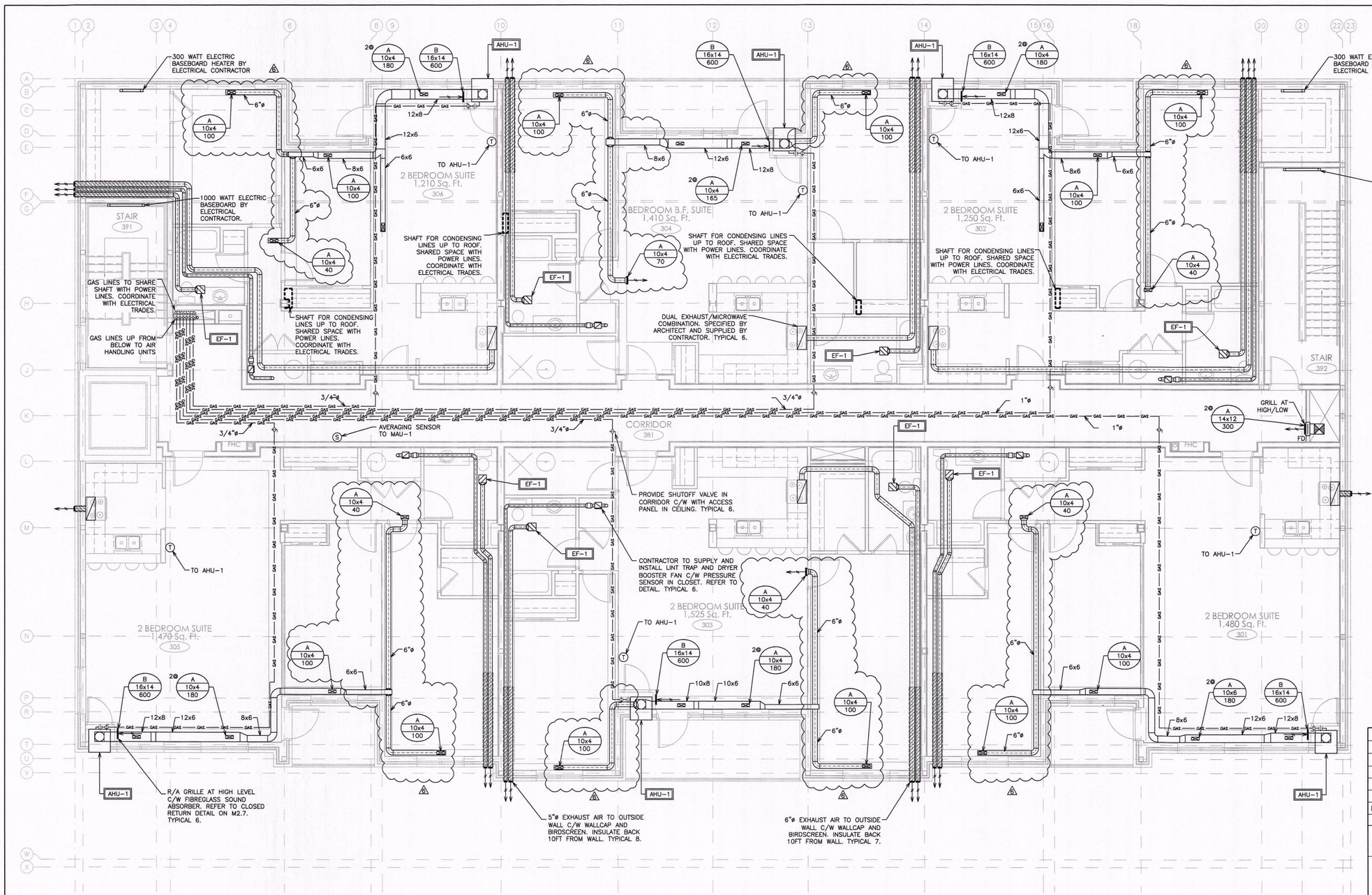
MECHANICAL HVAC SECOND FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST · OSHAWA,ON L1H 1B6
PHONE (905)576-8500 · FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 PROVINCE OF ONTARIO June 27/17

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	J.T.C.	DRAWING NO.	M2.3
DESIGN BY:	J.T.C./G.V.W.O.	CAD FILE:	115147 M
CHECKED BY:	G.V.W.O.	PLOT DATE:	06/28/17
DATE:	JUNE 2017	SUBMISSION:	PERMIT

NOT TO SCALE



BUILDING PERMIT #
201602195
CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
JUN 30 2017
PER:
CHIEF BUILDING OFFICIAL

HVAC LEGEND

	SUPPLY, RETURN AIR DUCT UP (RECT)
	SUPPLY, RETURN AIR DUCT DOWN (RECT)
	SUPPLY, RETURN AIR DUCT UP (ROUND)
	SUPPLY, RETURN AIR DUCT DOWN (ROUND)
	SUPPLY, RETURN, EXHAUST AIR GRILLE
	SIDE WALL GRILLE
QTY@ A B C	A– GRILLE/DIFFUSER TYPE B– DIFFUSER NECK SIZE/GRILLE SIZE C– AIR QUANTITY (CFM)
	SENSOR AND ASSOCIATED CONTROL WIRING
HRV-1	EQUIPMENT/FIXTURE TAG
	DIRECTION OF AIR FLOW
T	THERMOSTAT EQUAL TO HONEYWELL TB8220U: 7–DAY PROGRAMMABLE C/W AUTO CHANGEOVER
FD	FIRE DAMPER
GAS	GAS LINE
	PIPE UP, PIPE DOWN
	SHUTOFF VALVE
	UNION
	PIPE BREAK/CONTINUATION

NO.	REVISION	DATE	BY	APPROVED
6	RE–ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
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3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL HVAC THIRD FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST · OSHAWA,ON L1H 1B6
PHONE (905)576–8500 · FAX (905)576–9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
June 27/17
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	J.T.C.
DESIGN BY:	J.T.C./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	JUNE 2017
PROJECT NO.	115147
DRAWING NO.	M2.4
CAD FILE:	115147 M
PLOT DATE:	06/28/17
SUBMISSION:	PERMIT

NOTE:
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NOTE:
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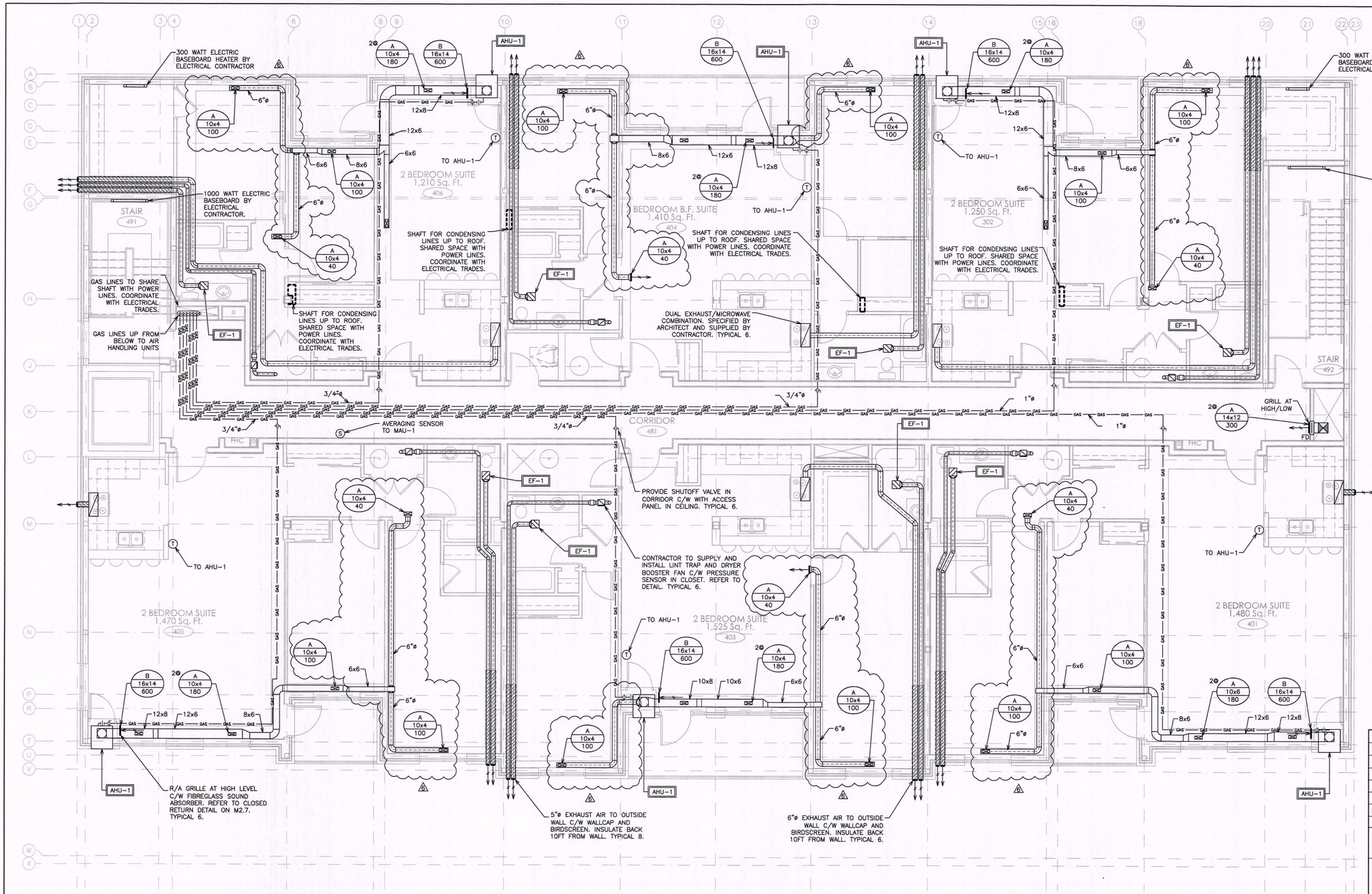
NOT TO SCALE



HVAC LEGEND	
	SUPPLY, RETURN AIR DUCT UP (RECT)
	SUPPLY, RETURN AIR DUCT DOWN (RECT)
	SUPPLY, RETURN AIR DUCT UP (ROUND)
	SUPPLY, RETURN AIR DUCT DOWN (ROUND)
	SUPPLY, RETURN, EXHAUST AIR GRILLE
	SIDE WALL GRILLE
QTY A B C	A– GRILLE/DIFFUSER TYPE B– DIFFUSER NECK SIZE/GRILLE SIZE C– AIR QUANTITY (CFM)
	SENSOR AND ASSOCIATED CONTROL WIRING
HRV-1	EQUIPMENT/FIXTURE TAG
	DIRECTION OF AIR FLOW
	DIRECTION OF AIR FLOW
T	THERMOSTAT EQUAL TO HONEYWELL TB8220U: 7–DAY PROGRAMMABLE C/W AUTO CHANGEOVER
FD	FIRE DAMPER
GAS	GAS LINE
	PIPE UP, PIPE DOWN
	SHUTOFF VALVE
	UNION
	PIPE BREAK/CONTINUATION

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NO.	REVISION	DATE	BY	APPROVED
6	RE–ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

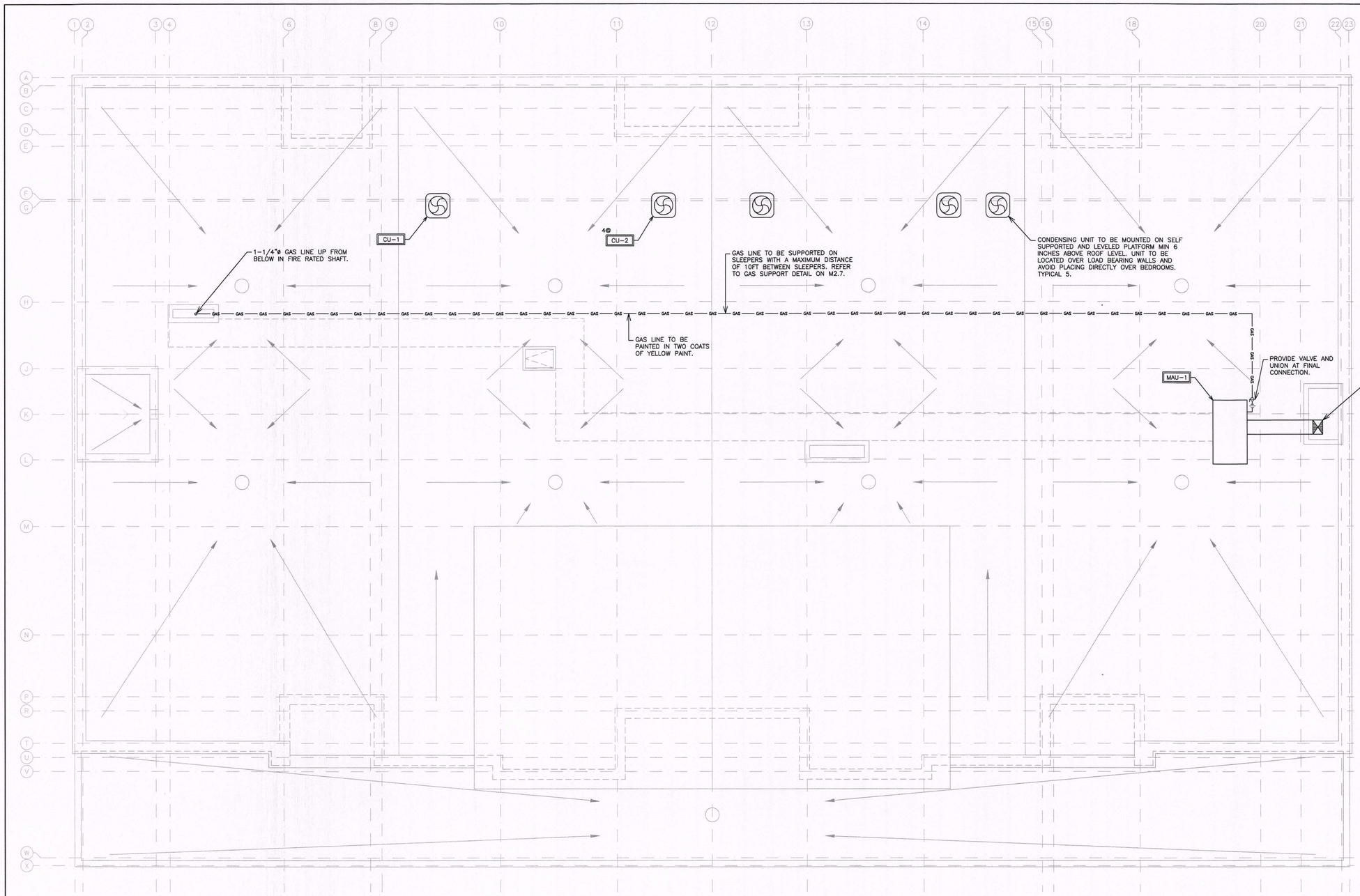
MECHANICAL HVAC FOURTH FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576–8500 • FAX (905)576–9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 June 27/17 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	J.T.C.
DESIGN BY:	J.T.C./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	JUNE 2017
PROJECT NO.	115147
DRAWING NO.	M2.5
CAD FILE:	115147 M
PLOT DATE:	06/28/17
SUBMISSION:	PERMIT

NOT TO SCALE



BUILDING PERMIT #
201602195
CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
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JUN 30 2017
PER: _____
CHIEF BUILDING OFFICIAL

HVAC LEGEND	
	SUPPLY, RETURN AIR DUCT DOWN (RECT)
HRV-1	EQUIPMENT/FIXTURE TAG
FD	FIRE DAMPER
GAS	GAS LINE
	PIPE UP, PIPE DOWN
	SHUTOFF VALVE
	UNION

NO.	REVISION	DATE	BY	APPROVED
6	RE-ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL HVAC ROOF LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
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INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
June 27/17
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	J.T.C.
DESIGN BY:	J.T.C./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	JUNE 2017

PROJECT NO. 115147
DRAWING NO. M2.6
CAD FILE: 115147 M
PLOT DATE: 06/28/17
SUBMISSION: PERMIT

NOT TO SCALE

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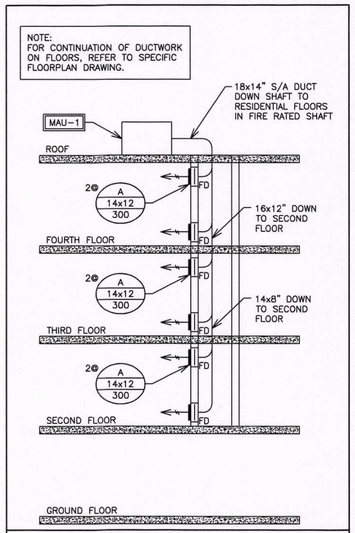
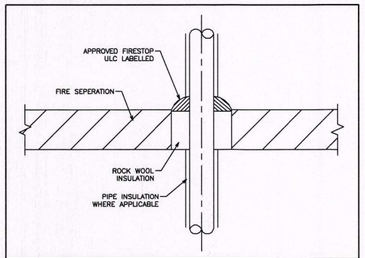
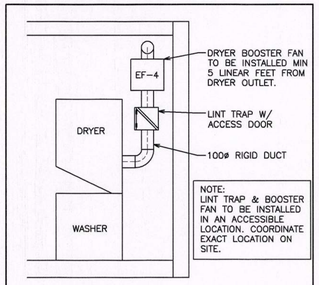


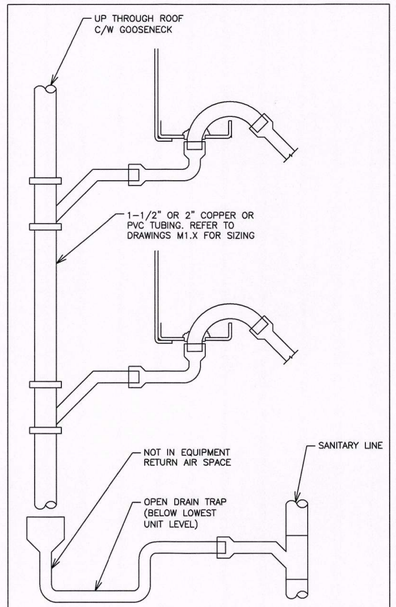
CORRIDOR MAKE-UP AIR RISER DIAGRAM
NTS



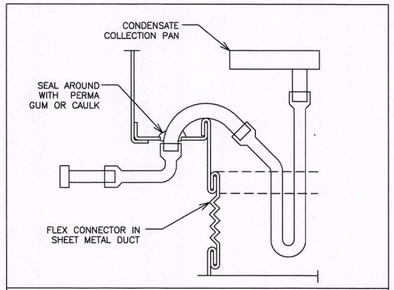
DETAIL OF SUGGESTED FIRE STOPPING
NTS



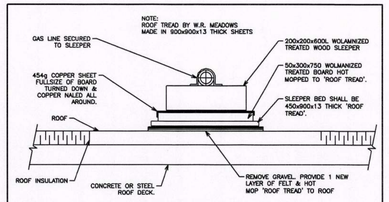
DRYER EXHAUST
NTS



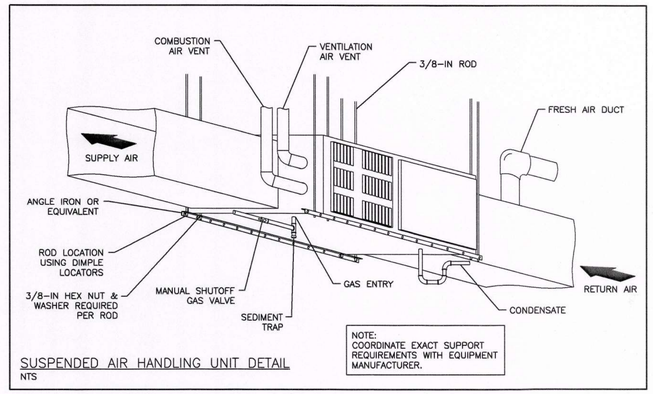
MULTI-STORY CONDENSATE REMOVAL SYSTEM
NTS



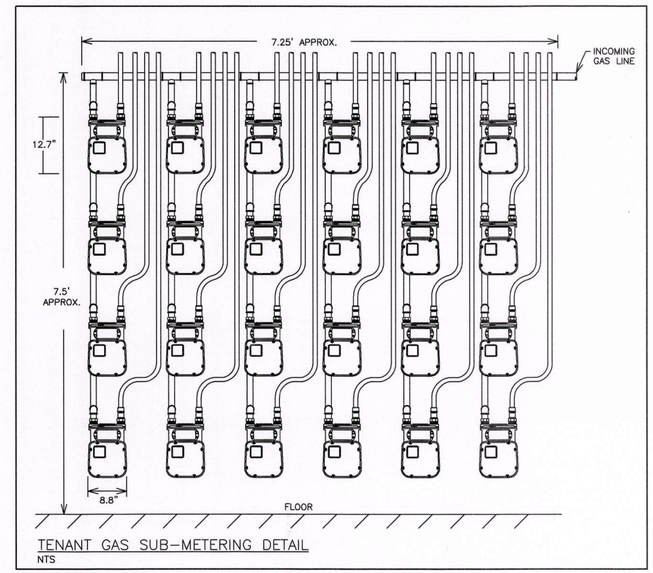
CONDENSATE TUBE EXIT WITH CLOSED DUCT RETURN
NTS



ROOF TOP GAS PIPING SUPPORT DETAIL
NTS



SUSPENDED AIR HANDLING UNIT DETAIL
NTS



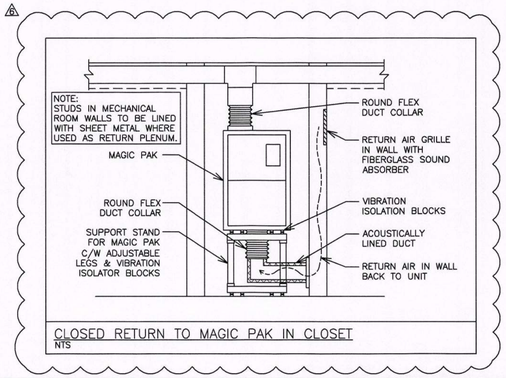
TENANT GAS SUB-METERING DETAIL
NTS

EXHAUST FAN SCHEDULE							
TAG	MANUFACTURER	MODEL	AIR FLOW	MOUNTING	VOLTAGE	CONTROLS	ACCESSORIES
EF-1	GREENHECK	XB-90C	90 CFM	CEILING	120V	SWITCH	BACKDRAFT DAMPER
EF-2	GREENHECK	CSP-A-190	202 CFM	CEILING	120V	TIME CLOCK	BACKDRAFT DAMPER
EF-3	GREENHECK	CSP-A-125	125 CFM	CEILING	120V	TIME CLOCK	BACKDRAFT DAMPER
EF-4	FANTECH	DBF110	100 CFM	INLINE	120V	PRESSURE SWITCH	BACKDRAFT DAMPER
NOTES: ADDITIONAL COSTS INCURRED AS A RESULT OF ANY ALTERNATIVE MODELS ARE AT THE EXPENSE OF THE CONTRACTOR							

MAKE-UP AIR UNIT SCHEDULE								
TAG	MANUFACTURER	MODEL	AIR FLOW	COOLING	HEATING INPUT/OUTPUT	ELECTRICAL	WEIGHT	CONTROLS
MAU-1	AAON	RN-010	1800 CFM	5 TONS	210/168 MBH	208V/3PH	1214 LBS	AVERAGING SENSORS, SYSTEM MANAGER TS-II

CONDENSING UNIT SCHEDULE					
TAG	MANUFACTURER	MODEL	COOLING	ELECTRICAL	NOTES
CU-1	KEEPRITE	C4A3	5 TONS	208V/1P, 40A	VARIABLE CAPACITY SCROLL COMPRESSOR
CU-2	KEEPRITE	C4A3	3 TONS	208V/1P, 40A	VARIABLE CAPACITY SCROLL COMPRESSOR

AIR HANDLING UNIT SCHEDULE								
TAG	MANUFACTURER	MODEL	AIR FLOW	STATIC	HEATING (INPUT/OUTPUT)	COOLING	VOLTAGE	CONTROLS
AHU-1	MAGIC-PAK	HWC9N3311P18	600 CFM	0.2" W.C.	33/31 MBH	1.5 TONS	AS REQUIRED	7 DAY PROGRAMMABLE THERMOSTAT
AHU-2	KEEPRITE	G9MAE060	2000 CFM	0.1" W.C.	60/58 MBH	SEE CU-1	AS REQUIRED	7 DAY PROGRAMMABLE THERMOSTAT
AHU-3	KEEPRITE	G9MAE060	1200 CFM	0.1" W.C.	60/58 MBH	SEE CU-2	AS REQUIRED	7 DAY PROGRAMMABLE THERMOSTAT



CLOSED RETURN TO MAGIC PAK IN CLOSET
NTS

HRV SCHEDULE					
TAG	MANUFACTURER	MODEL	AIR FLOW	VOLTAGE	CONTROLS
HRV-1	ZEHNDER	CA350 HRV-VV-R	218 cfm @ 0.8" WC	AS REQUIRED	COMFOSENSE CONTROLLER
HRV-2	ZEHNDER	CA200 HRV-VV-R	116 cfm @ 0.8" WC	AS REQUIRED	COMFOSENSE CONTROLLER
HRV-3	VENMAR	6LC	560 cfm @ 0.2" WC	AS REQUIRED	INTERLOCK TO FURNACE

REGISTER, DIFFUSER AND GRILLE SCHEDULE					
TAG	MANUFACTURER	MODEL	DESCRIPTION	FINISH/COLOUR	NOTES
A	PRICE	520D-F-S-A	LOUVERED FACE SUPPLY C/W DAMPER	TO BE DETERMINED BY ARCHITECT	SHOWN ON DRAWINGS
B	PRICE	535D-F-L-A	LOUVERED FACE RETURN	TO BE DETERMINED BY ARCHITECT	SHOWN ON DRAWINGS
L	VENTEX	2425	STORMPROOF INTAKE LOUVER	TO BE DETERMINED BY ARCHITECT	SHOWN ON DRAWINGS
M	VENTEX	2415	STORMPROOF EXHAUST LOUVER	TO BE DETERMINED BY ARCHITECT	SHOWN ON DRAWINGS

GAS USAGE SUMMARY			
TAG	QTY	GAS INPUT	SUB-TOTAL
MAU-1	1	210 MBH	210 MBH
AHU-1	18	33 MBH	594 MBH
AHU-2	1	60 MBH	60 MBH
AHU-3	4	60 MBH	240 MBH
		TOTAL:	1104 MBH

NOTE:
HVAC CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND SUBMITTING ENBRIDGE GAS SERVICE FORMS AND COORDINATING SERVICE INSTALLATION.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NO.	REVISION	DATE	BY	APPROVED
6	RE-ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
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2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL HVAC NOTES & DETAILS

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96 KING STREET EAST · OSHAWA,ON L1H 1B6
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LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 PROVINCE OF ONTARIO June 27/17

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	J.T.C.	DRAWING NO.	M2.7
DESIGN BY:	J.T.C./G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	JUNE 2017	PLOT DATE:	06/28/17
		SUBMISSION:	PERMIT

NOT TO SCALE

HVAC NOTES

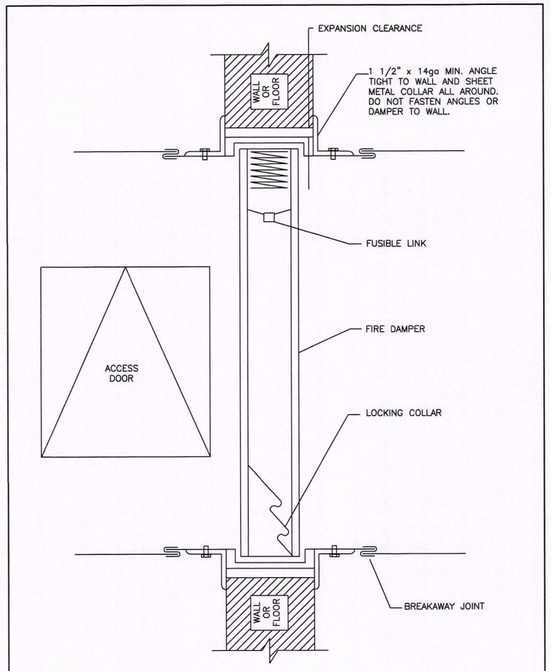
1. GENERAL
 1.1. COORDINATE EXACT LOCATION OF GRILLES AND DIFFUSERS WITH REFLECTED CEILING PLAN OR LIGHTING PLAN IF AVAILABLE. LIGHTING LOCATIONS TAKE PRIORITY.
 1.2. CONFIRM EXACT LOCATION OF THERMOSTATS/SENSORS WITH OWNER. MOUNT THERMOSTATS/SENSORS AT 4' ABOVE FINISHED FLOOR. ENSURE THERMOSTAT/SENSOR LOCATIONS WILL NOT BE AFFECTED BY DIRECT SUNLIGHT, COLD WALLS OR MILLWORK.
 1.3. PROVIDE 4" FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO AIR HANDLING UNITS.
 1.4. PROVIDE ACOUSTIC INSULATION IN FIRST 5' OF SUPPLY AND RETURN AIR DUCTS OFF AIR HANDLING UNITS AND AS INDICATED ON DRAWINGS.
 1.5. PROVIDE EXTERNAL INSULATION ON ALL SUPPLY AIR DUCTS AND ON ALL EXHAUST DUCTS WITHIN 10' OF OUTSIDE WALLS AND ROOF.
 1.6. BRANCH DUCTWORK TO DIFFUSERS TO BE SAME SIZE AS DIFFUSER NECK.
 1.7. PROVIDE TURNING VANES IN ALL SQUARE ELBOWS FOR SUPPLY AIR DUCTS.
 1.8. FLEXIBLE DUCT SHALL BE MAXIMUM 10' IN LENGTH AND SHALL BE SECURELY FASTENED TO DUCTS AND DIFFUSERS. PROVIDE HANGERS AND FLEXIBLE DUCTWORK WITHOUT SHARP 90'S, SAGGING, OR CRUSHING OF DUCT.
 1.9. PROVIDE TRAP AT OUTLET OF DRAIN FOR ROOFTOP HVAC EQUIPMENT
 1.10. PROVIDE FIRE STOPPING AROUND OPENINGS THROUGH FIRE SEPARATIONS.

2. FIRE DAMPERS
 2.0. PROVIDE FIRE DAMPERS AT ALL FIRE SEPARATIONS. FIRE DAMPERS SHALL BE C/W LINKAGE OUT OF THE AIR STREAM. FIRE DAMPER RATING TO MATCH THE RATING OF THE SEPARATION CROSSED. INSTALLATION MUST CONFORM TO LATEST NFPA/CUA 90A SPECIFICATIONS. ONLY USE ULC APPROVED EQUIPMENT. PROVIDE DUCT ACCESS DOORS AND BREAK AWAY FLANGES FOR ALL FIRE DAMPERS IN CONFORMANCE WITH CODE AND INSTALLATION INSTRUCTIONS.

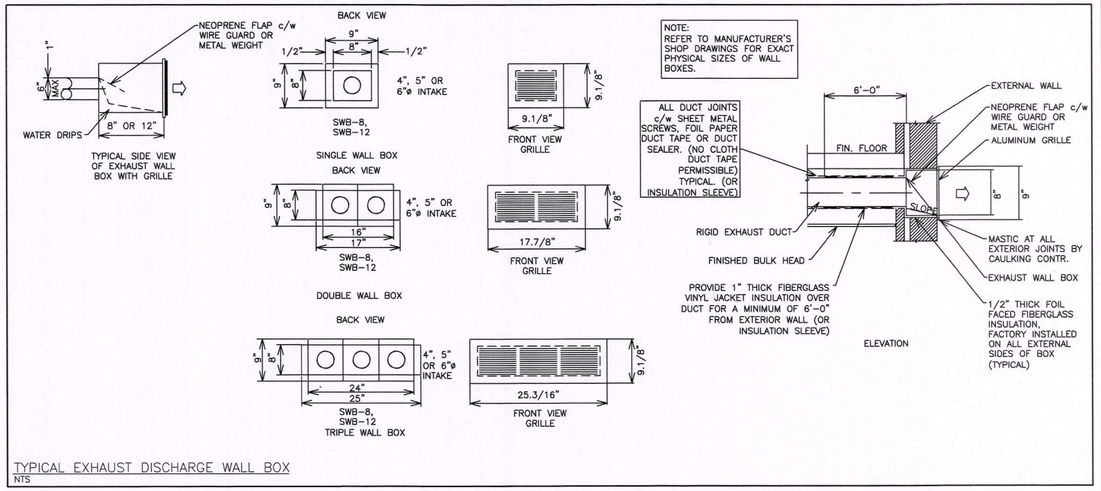
3. TESTS AND BALANCING
 3.1. BALANCING DAMPERS SHALL BE INSTALLED AT ALL TAKE-OFFS FROM BRANCH DUCTS, AND ALL BRANCH DUCT CONNECTIONS TO MAIN DUCTS. BALANCING DAMPERS SHALL BE MANUALLY OPERATED OPPOSED BLADE TYPE, SPLITTER TYPE OR BUTTERFLY TYPE, COMPLETE WITH LOCKING QUADRANT OPERATOR.
 3.2. AIR TEST AND BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCING COMPANY. THE AIR BALANCING COMPANY SHALL BE APPROVED BY THE ENGINEER.
 3.3. SCOPE OF BALANCING WORK:
  3.3.1. ALL LISTED AIR HANDLING SYSTEMS SHALL BE BALANCED TO WITHIN 5% OF THE NOTED DESIGN AIR VOLUMES AS PER PLANS AND SPECIFICATIONS.
  3.3.2. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE HVAC SYSTEM FULLY OPERATIONAL TWO WEEKS BEFORE TURNOVER TO THE OWNER. THIS WILL INCLUDE THE REQUIREMENT TO INSTALL CLEAN FILTERS IN ALL RELATED HVAC EQUIPMENT BEFORE TIME OF AIR TESTING AND TO MAKE ALL AIR SYSTEMS FULLY OPERATIONAL.

4. MATERIALS
 4.1. DUCTWORK
  4.1.1. IN CONFORMANCE WITH SMACNA, ASHRAE, OBC, NFPA 90A
  4.1.2. SHEET METAL SHALL BE BEST QUALITY LOCK FORMING GALVANIZED SHEET METAL, GALVANIZING SHALL BE TO ASTM A525 (G90), HAVING A THICKNESS OF 0.054mm AND WEIGHING NOT LESS THAN 0.31kg/m² ON EACH SURFACE.
  4.1.3. PROVIDE INSTRUMENTATION TEST PORTS IN DUCTS FOR PILOT TUBE INSERTION WITH CAM-ACTION HANDLE, MOULDED NEOPRENE GASKET AND EXPANSION PLUG, ZINC COATED STEEL CONSTRUCTION.
 4.2. FLEXIBLE CONNECTIONS
  4.2.1. PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS WITH UL APPROVED FABRIC OF 6" MINIMUM WIDTH AND WEIGHING NOT LESS THAN 0.8136kg/m².
 4.3. INSULATION
  4.3.1. PROVIDE 1" INTERNAL ACOUSTIC INSULATION ON:
   4.3.1.1. THE FIRST 5' OFF SUPPLY AND RETURN DUCTS OFF ALL AIR HANDLING UNITS.
  4.3.2. PROVIDE 1" EXTERNAL INSULATION ON:
   4.3.2.1. ALL INDOOR & OUTDOOR REFRIGERATION PIPING
   4.3.2.2. ALL SUPPLY AIR DUCTS WHICH ARE NOT LOCATED IN A RETURN AIR PLENUM.
   4.3.2.3. EXHAUST DUCTS THROUGH ATTICS AND 10' BACK FROM WALL
  4.3.3. PROVIDE 2" EXTERNAL INSULATION ON:
   4.3.3.1. ALL SUPPLY AND RETURN AIR DUCTS THROUGH ATTICS OR UN-INSULATED AREAS

5. CONTROL WIRING
 5.1. ALL CONTROL WIRING SHALL BE RUN PARALLEL TO BUILDING LINES AND TIGHT TO ROOF DECK OR WALLS.
 5.2. ALL CONCEALED INDOOR CONTROL WIRING SHALL BE RUN IN LVT.
 5.3. ALL EXPOSED INDOOR CONTROL WIRING IN UNFINISHED AREAS, T-BAR CEILING SPACES, ATTICS AND CRAWL SPACES SHALL BE RUN IN EMT CONDUIT WITH FINAL CONNECTION IN BX TO EQUIPMENT/COMPONENTS.
 5.4. ALL OUTDOOR CONTROL WIRING SHALL BE RUN IN LIQUIDTIGHT.
 5.5. FLEXIBLE CABLE MUST BE STRAPPED TO SUPPORT WITHIN 12" OF TERMINATION BOX OR EQUIPMENT.

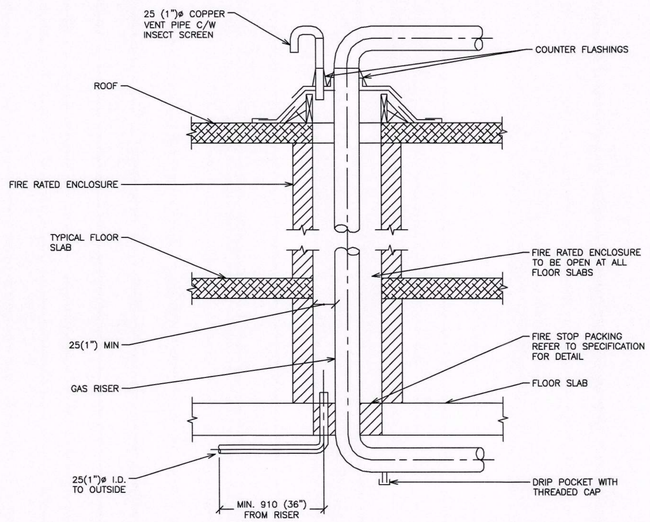


FIRE DAMPER DETAIL
NTS



TYPICAL EXHAUST DISCHARGE WALL BOX
NTS

FIRE DAMPER OR FIRE STOP FLAP
U.L.C. LABELED FIRE DAMPERS OR FIRE STOP FLAPS SHALL BE INSTALLED AT EVERY LOCATION WHERE A DUCT PIERCES A FIRE SEPARATION OR FIRE-RATED CEILING MEMBRANE, EXCEPT AS PERMITTED IN THE ONTARIO BUILDING CODE. REFER TO ARCHITECTURAL PLANS FOR FIRE SEPARATION REQUIREMENTS.



GAS RISER VENTILATION DETAIL
NTS

NO.	REVISION	DATE	BY	APPROVED
6	RE-ISSUED AS ADDENDUM	JUN 28	G.O.	G.V.W.O.
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
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3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

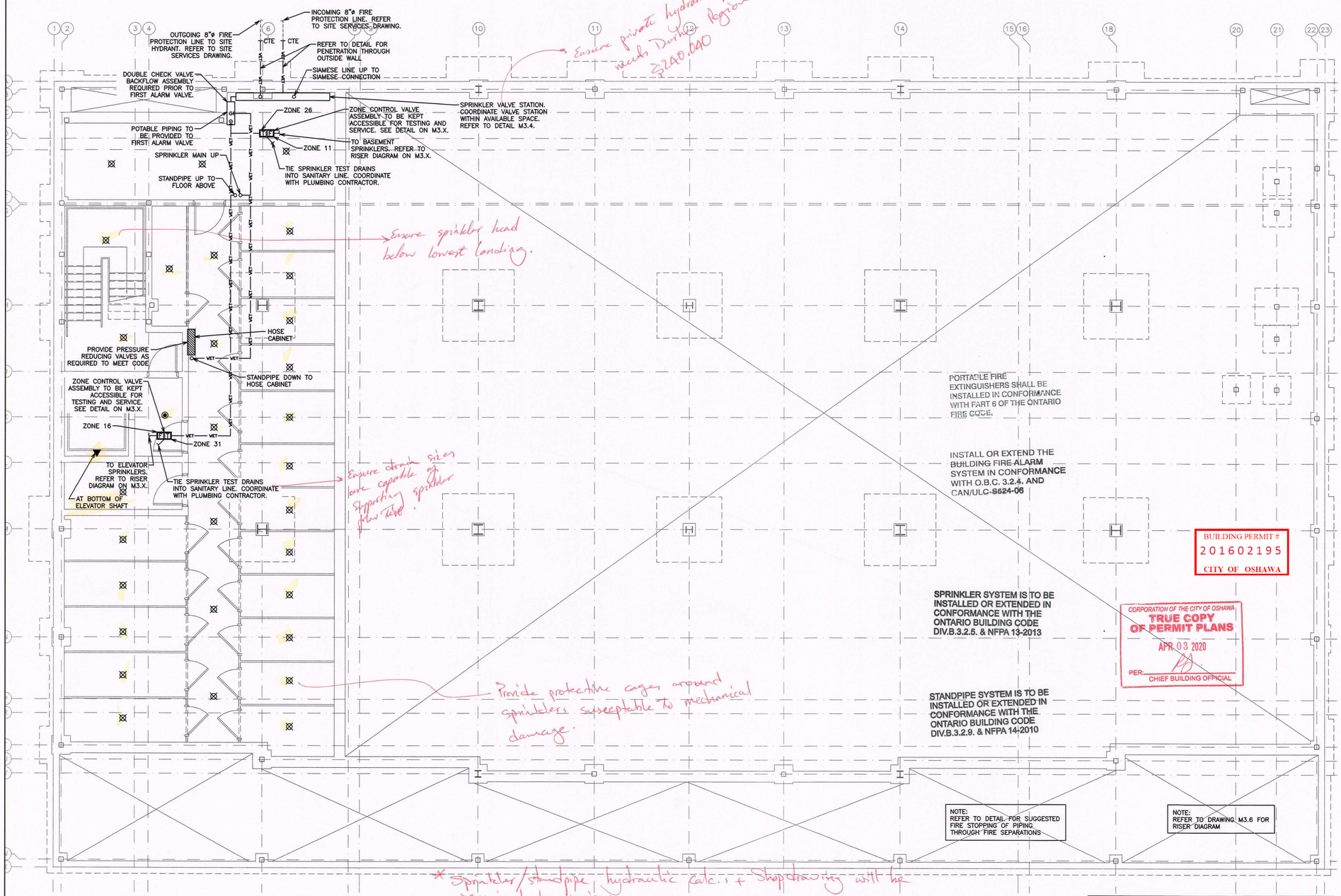
MECHANICAL HVAC NOTES & DETAILS

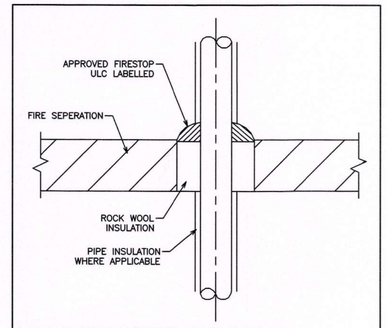
D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST · OSHAWA,ON L1H 1B6
PHONE (905)576-8500 · FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 June 27/17 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	J.T.C.
DESIGN BY:	J.T.C./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	JUNE 2017
PROJECT NO.	115147
DRAWING NO.	M2.8
CAD FILE:	115147 M
PLOT DATE:	06/28/17
SUBMISSION:	PERMIT

NOT TO SCALE





DETAIL OF SUGGESTED FIRE STOPPING
NTS

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
1. SPRINKLER HEAD LAYOUT SHOWN FOR SCHEMATIC PURPOSES ONLY. THE SPRINKLER CONTRACTOR IS REQUIRED TO DESIGN AND INSTALL A COMPLETE SPRINKLER SYSTEM IN CONFORMANCE WITH NFPA 13-2012 UNDER BASE CONTRACT.
2. DESIGN DRAWINGS TO INCLUDE ALL PIPING COMPLETE WITH SIZES, VALVES, ASSOCIATED COMPONENTS AND HYDRAULIC CALCULATIONS.

NOTE:
1. DESIGN AND INSTALLATION OF SPRINKLER SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 13-2013 EDITION, AND OBC-2012 EDITION.
2. DESIGN AND INSTALLATION OF BUILDING STANDPIPE SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 14-2010 EDITION AND OBC 2012 EDITION INCLUDING LATEST AMENDMENTS.
3. PROVIDE SPRINKLER AND STAND PIPE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR OUR REVIEW PRIOR TO INSTALLATION OF PIPING FOR THESE SYSTEMS.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER: CHIEF BUILDING OFFICIAL

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL SPRINKLER BASEMENT LAYOUT

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INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100139545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	B.C.A
DESIGN BY:	B.C.A/G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016
PROJECT NO.	115147
DRAWING NO.	M3.1
CAD FILE:	115147 M
PLOT DATE:	12/20/16
SUBMISSION:	PERMIT

NOT TO SCALE

SPRINKLER LEGEND	
—— VET —— VET ——	SPRINKLER LINE (WET)
◉	SEMI-RECESSED PENDENT SPRINKLER HEAD C/W ESCUTCHEON
⊠	UPRIGHT SPRINKLER HEAD IN UNFINISHED EXPOSED PENDENT IN DRYWALL CEILING
▲	SIDEWALL SPRINKLER HEAD

NOTE:
ENTIRE BUILDING SHALL BE PROTECTED BY WITH SPRINKLER AND STANDPIPE SYSTEM.

NOTE:
COORDINATE SHARED SPACES WITH GAS PIPING, HVAC DUCTWORK AND PLUMBING PIPING.

NOTE:
CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THRUST BLOCKS BASED ON FINAL PIPING LAYOUT

NOTE:
SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIVISION B 3.2.5. AND NFPA 13-2007.

NOTE:
BACKFLOW PREVENTION DEVICES TO PROTECT A POTABLE WATER SYSTEM FROM CONTAMINATION SHALL BE SELECTED, INSTALLED AND FIELD TESTED IN ACCORDANCE WITH CAN/CSA-B64.10, "BACKFLOW PREVENTION DEVICES - SELECTION, INSTALLATION, MAINTENANCE AND FIELD TESTING".

ADD Sprinkler * Residential above.

Coordinate sprinkler location with wall layout.

SIAMESE LINE UP FROM BELOW TO CONNECTION

SIAMESE CONNECTION SEE DRAWING M3.X FOR DETAILS

SPRINKLER RISER UP TO HIGH LEVEL FROM BELOW

STANDPIPE MAIN UP FROM BELOW TO HIGH LEVEL

ZONE 27

ZONE CONTROL VALVE ASSEMBLY TO BE KEPT ACCESSIBLE FOR TESTING AND SERVICE. SEE DETAIL ON M3.X.

TO COMMERCIAL FLOOR SPRINKLERS. REFER TO RISER DIAGRAM ON M3.X.

ZONE 12

TIE SPRINKLER TEST DRAINS INTO SANITARY LINE. COORDINATE WITH PLUMBING CONTRACTOR.

SPRINKLER RISER UP TO FLOOR ABOVE

STANDPIPE RISER UP

PROVIDE PRESSURE REDUCING VALVES AS REQUIRED TO MEET CODE. TYPICAL ALL FLOORS.

HOSE CABINET. TYPICAL 2.

STANDPIPE DOWN TO HOSE CABINET. TYPICAL 2.

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN CONFORMANCE WITH PART 6 OF THE ONTARIO FIRE CODE.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

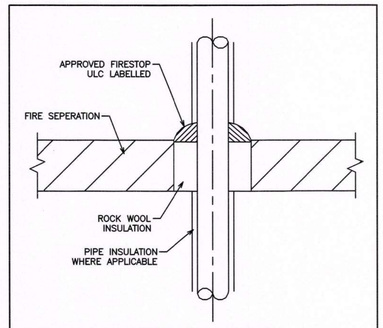
SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.5. & NFPA 13-2013

STANDPIPE SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.9. & NFPA 14-2010

STANDPIPE RISER UP

HOSE CABINET

STANDPIPE DOWN TO HOSE CABINET



DETAIL OF SUGGESTED FIRE STOPPING
NTS

NOTE:
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NOTE:
1. SPRINKLER HEAD LAYOUT SHOWN FOR SCHEMATIC PURPOSES ONLY. THE SPRINKLER CONTRACTOR IS REQUIRED TO DESIGN AND INSTALL A COMPLETE SPRINKLER SYSTEM IN CONFORMANCE WITH NFPA 13-2012 UNDER BASE CONTRACT.
2. DESIGN DRAWINGS TO INCLUDE ALL PIPING COMPLETE WITH SIZES, VALVES, ASSOCIATED COMPONENTS AND HYDRAULIC CALCULATIONS.

standpipe protection per NFPA 14 -

NOTE:
1. DESIGN AND INSTALLATION OF SPRINKLER SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 13-2013 EDITION, AND OBC-2012 EDITION.
2. DESIGN AND INSTALLATION OF BUILDING STANDPIPE SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 14-2010 EDITION AND OBC 2012 EDITION INCLUDING LATEST AMENDMENTS.
3. PROVIDE SPRINKLER AND STAND PIPE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR OUR REVIEW PRIOR TO INSTALLATION OF PIPING FOR THESE SYSTEMS.

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER: CHIEF BUILDING OFFICIAL

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOTE:
LOCATIONS OF INCOMING SPRINKLER LINES TO SUITES ARE TO BE COORDINATED AT TIME OF CONSTRUCTION

NOTE:
REFER TO DETAIL FOR SUGGESTED FIRE STOPPING OF PIPING THROUGH FIRE SEPARATIONS

NOTE:
REFER TO DRAWING M3.6 FOR RISER DIAGRAM

NOTE * Sprinkler piping support & sprinkler coverage to be site verified.

* provide sprinkler restraints per system pressure

SPRINKLER LEGEND	
—— VET —— VET ——	SPRINKLER LINE (WET)
◉	SEMI-RECESSED PENDENT SPRINKLER HEAD C/W ESCUTCHEON
⊠	UPRIGHT SPRINKLER HEAD IN UNFINISHED EXPOSED PENDENT IN DRYWALL CEILING
▲	SIDEWALL SPRINKLER HEAD

NOTE:
ENTIRE BUILDING SHALL BE PROTECTED BY WITH SPRINKLER AND STANDPIPE SYSTEM.

NOTE:
COORDINATE SHARED SPACES WITH GAS PIPING, HVAC DUCTWORK AND PLUMBING PIPING.

NOTE:
TYPICAL BULKHEADS DETAILS ARE FOR ILLUSTRATION ONLY. FINAL SITE COORDINATION BETWEEN ALL TRADES WILL DETERMINE ACTUAL ROUTING.

NOTE:
SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIVISION B 3.2.5. AND NFPA 13-2007.

NOTE:
NO EXTRA TO BE PROVIDED FOR ADDITIONAL SPRINKLER HEAD REQUIREMENTS. SPRINKLER HEADS SHOWN FOR SCHEMATIC PURPOSES ONLY. THE SPRINKLER CONTRACTOR IS REQUIRED TO DESIGN AND INSTALL A COMPLETE SPRINKLER SYSTEM.

coordinate layout with interior walls as required.

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
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2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

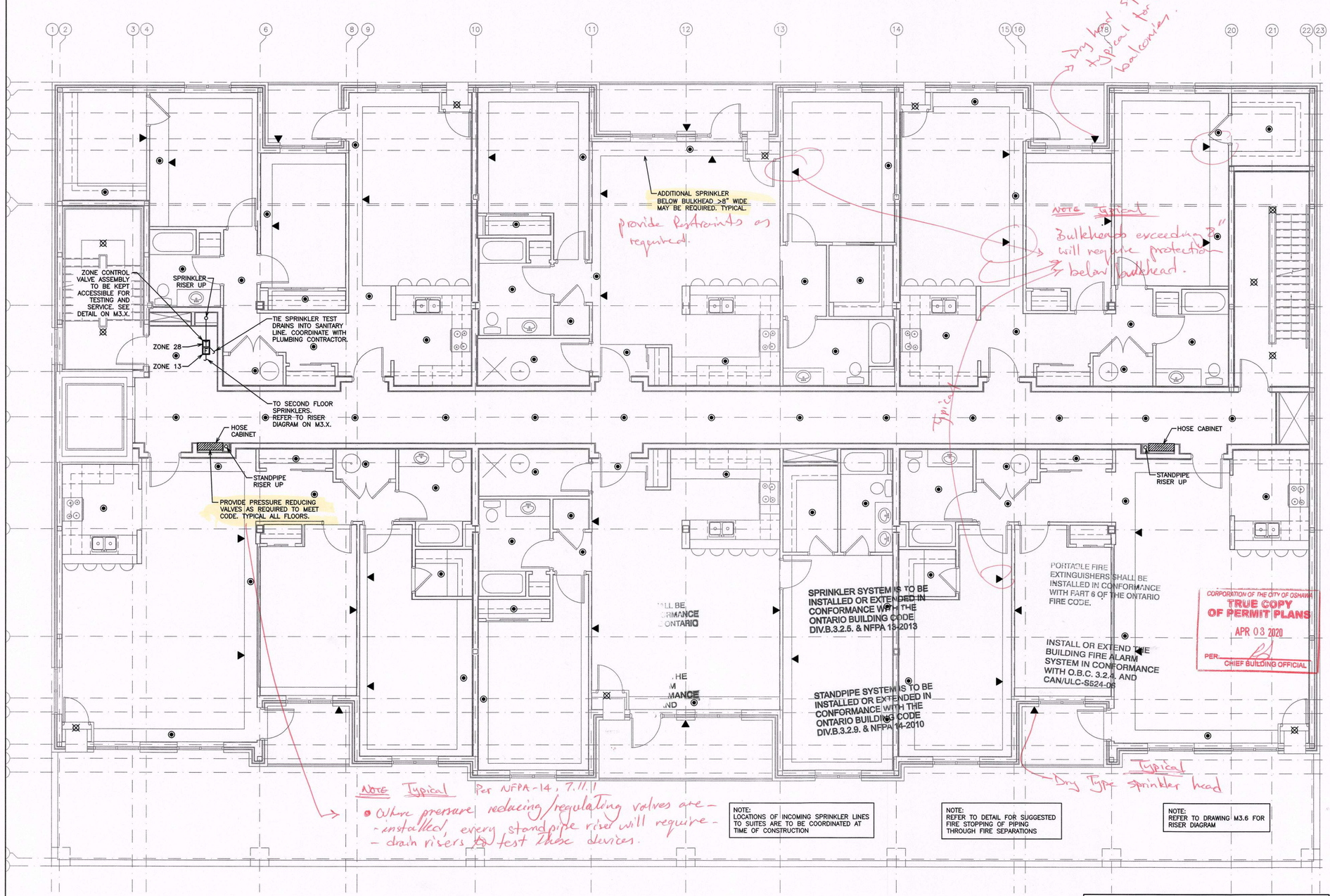
MECHANICAL SPRINKLER GROUND FLOOR LAYOUT

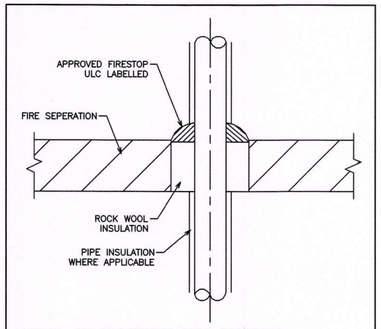
D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST · OSHAWA,ON L1H 1B6
PHONE (905)576-8500 · FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100138545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M3.2
DESIGN BY:	B.C.A/G.V.W.O.	CAD FILE:	115147 M
CHECKED BY:	G.V.W.O.	PLOT DATE:	12/20/16
DATE:	DECEMBER 2016	SUBMISSION:	PERMIT

NOT TO SCALE





DETAIL OF SUGGESTED FIRE STOPPING
NTS

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
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2. DESIGN DRAWINGS TO INCLUDE ALL PIPING COMPLETE WITH SIZES, VALVES, ASSOCIATED COMPONENTS AND HYDRAULIC CALCULATIONS.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOTE:
1. DESIGN AND INSTALLATION OF SPRINKLER SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 13-2013 EDITION, AND OBC-2012 EDITION.
2. DESIGN AND INSTALLATION OF BUILDING STANDPIPE SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 14-2010 EDITION AND OBC 2012 EDITION INCLUDING LATEST AMENDMENTS.
3. PROVIDE SPRINKLER AND STAND PIPE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR OUR REVIEW PRIOR TO INSTALLATION OF PIPING FOR THESE SYSTEMS.

NOTE:
ENTIRE BUILDING SHALL BE PROTECTED BY WITH SPRINKLER AND STANDPIPE SYSTEM.

NOTE:
COORDINATE SHARED SPACES WITH GAS PIPING, HVAC DUCTWORK AND PLUMBING PIPING.

NOTE:
TYPICAL BULKHEADS DETAILS ARE FOR ILLUSTRATION ONLY. FINAL SITE COORDINATION BETWEEN ALL TRADES WILL DETERMINE ACTUAL ROUTING.

NOTE:
LOCATIONS OF INCOMING SPRINKLER LINES TO SUITES ARE TO BE COORDINATED AT TIME OF CONSTRUCTION

NOTE:
SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIVISION B 3.2.5. AND NFPA 13-2007.

NOTE:
REFER TO DETAIL FOR SUGGESTED FIRE STOPPING OF PIPING THROUGH FIRE SEPARATIONS

NOTE:
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NOTE:
REFER TO DRAWING M3.6 FOR RISER DIAGRAM

SPRINKLER LEGEND	
—— WET —— WET ——	SPRINKLER LINE (WET)
◉	SEMI-RECESSED PENDENT SPRINKLER HEAD C/W ESCUTCHEON
⊠	UPRIGHT SPRINKLER HEAD IN UNFINISHED EXPOSED PENDENT IN DRYWALL CEILING
▲	SIDEWALL SPRINKLER HEAD

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REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
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MECHANICAL SPRINKLER SECOND FLOOR LAYOUT

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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M3.3
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
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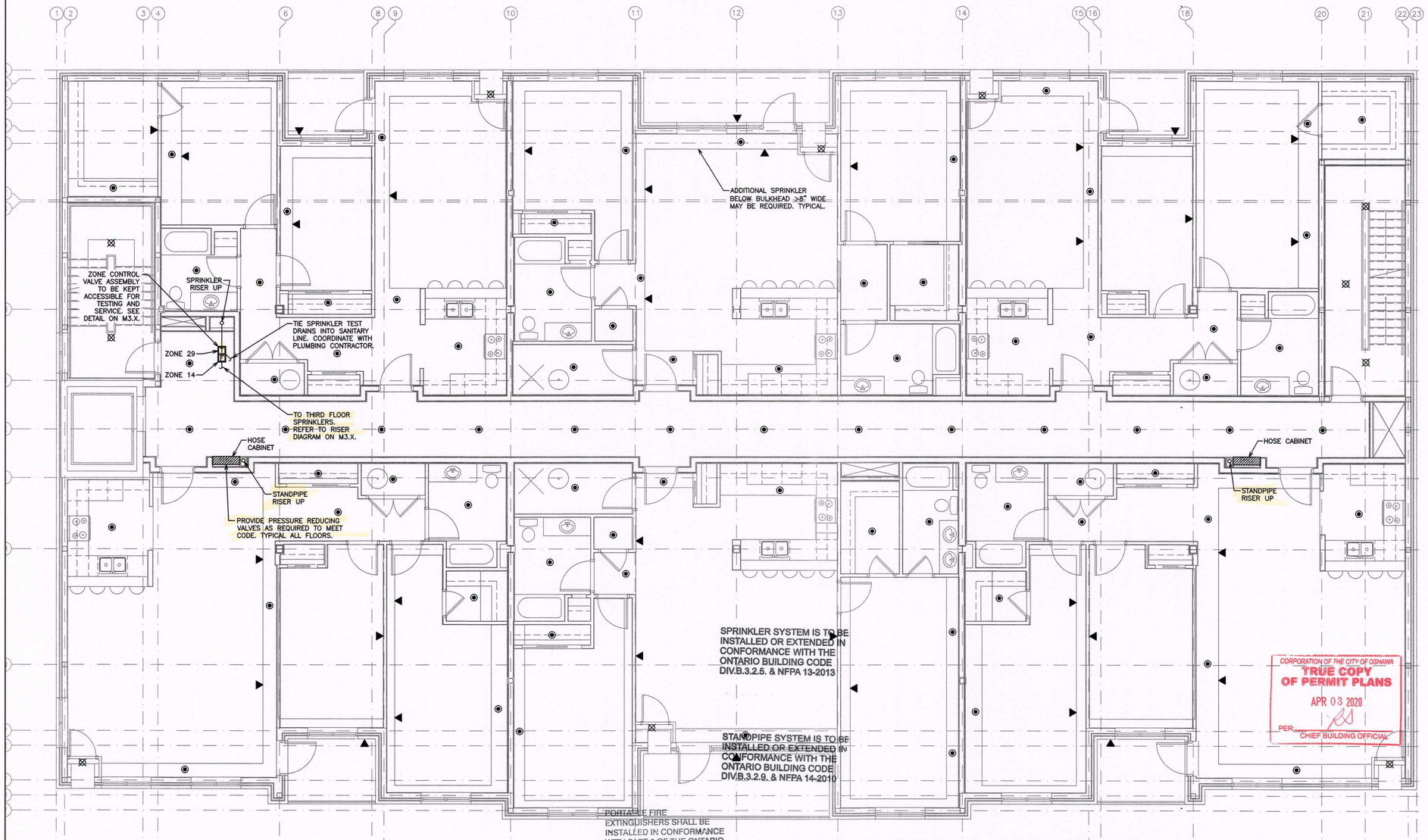

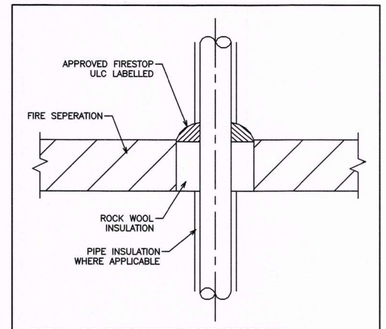

DETAIL OF SUGGESTED FIRE STOPPING
NTS

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2. DESIGN DRAWINGS TO INCLUDE ALL PIPING COMPLETE WITH SIZES, VALVES, ASSOCIATED COMPONENTS AND HYDRAULIC CALCULATIONS.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOTE:
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3. PROVIDE SPRINKLER AND STAND PIPE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR OUR REVIEW PRIOR TO INSTALLATION OF PIPING FOR THESE SYSTEMS.

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER:
CHIEF BUILDING OFFICIAL

NOTE:
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NOTE:
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NOTE:
REFER TO DETAIL FOR SUGGESTED FIRE STOPPING OF PIPING THROUGH FIRE SEPARATIONS

NOTE:
REFER TO DRAWING M3.6 FOR RISER DIAGRAM

SPRINKLER LEGEND	
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▲	SIDEWALL SPRINKLER HEAD

refer to M3.3 for notes

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REVISIONS

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PETER HOOGER

MECHANICAL SPRINKLER THIRD FLOOR LAYOUT

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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
DEC 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M3.4
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

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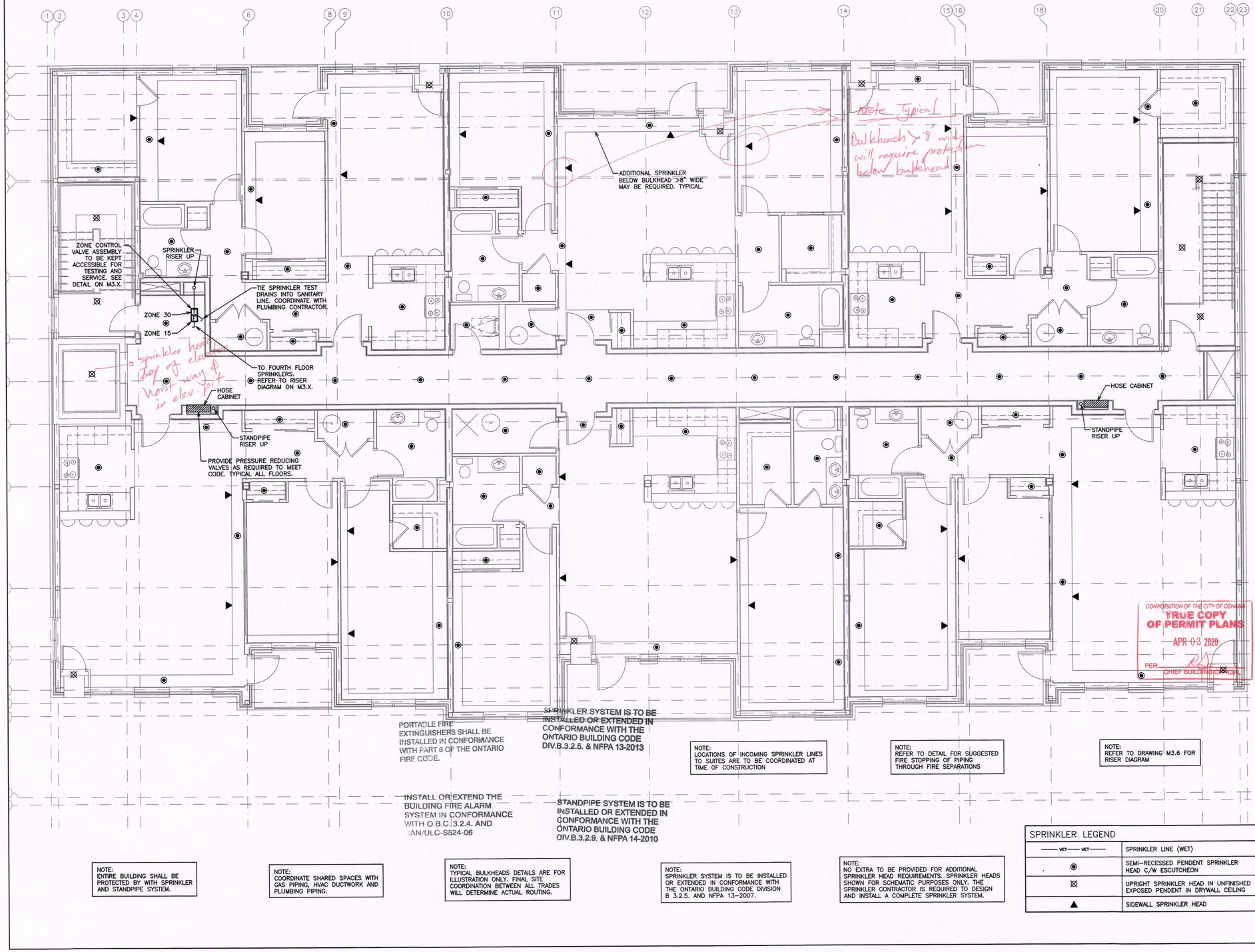

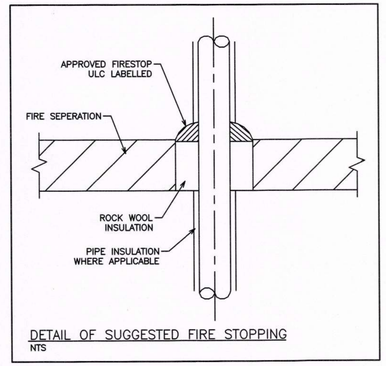

DETAIL OF SUGGESTED FIRE STOPPING
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CITY OF OSHAWA

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3. PROVIDE SPRINKLER AND STAND PIPE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR OUR REVIEW PRIOR TO INSTALLATION OF PIPING FOR THESE SYSTEMS.

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN CONFORMANCE WITH PART 6 OF THE ONTARIO FIRE CODE.

SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.5. & NFPA 13-2013

NOTE:
LOCATIONS OF INCOMING SPRINKLER LINES TO SUITES ARE TO BE COORDINATED AT TIME OF CONSTRUCTION

NOTE:
REFER TO DETAIL FOR SUGGESTED FIRE STOPPING OF PIPING THROUGH FIRE SEPARATIONS

NOTE:
REFER TO DRAWING M3.6 FOR RISER DIAGRAM

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

STANDPIPE SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.9. & NFPA 14-2010

NOTE:
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▲	SIDEWALL SPRINKLER HEAD

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REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL SPRINKLER FOURTH FLOOR LAYOUT

D.G. Biddle & Associates Limited
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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136595
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M3.5
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOT TO SCALE

SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.5. & NFPA 13-2013

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN CONFORMANCE WITH PART 6 OF THE ONTARIO FIRE CODE.

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER: RS
CHIEF BUILDING OFFICIAL

GENERAL REQUIREMENTS FOR MECHANICAL WORK

1. SCOPE OF WORK
 1.1. CONFORM TO THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT.
 1.2. THE GENERAL MECHANICAL SPECIFICATIONS SHALL APPLY TO AND BE PART OF EACH OF THE SECTIONS COVERING THE MECHANICAL TRADES WORK.
 1.3. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE O.B.C., ALL OTHER APPLICABLE CODES, REGULATIONS, BY-LAWS AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATIONS OF THE AUTHORITIES HAVING JURISDICTION. THESE CODES AND STANDARDS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.

2. EXAMINATION OF SITE AND INFORMATION
 2.1. EACH SUBCONTRACTOR, BEFORE PRICING, SHALL EXAMINE THE SITE, THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND THEY SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT THEIR TENDER MAY INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK.

3. RELATIONSHIP TO OTHER TRADES
 3.1. THIS SUBCONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS INSTALLING EQUIPMENT, PIPING, OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR INSTALLATION, AND THEY SHALL ARRANGE THEIR EQUIPMENT, PIPING, ETC., IN PROPER RELATION WITH OTHER APPARATUS, AND WITH THE BUILDING CONSTRUCTION. THIS SUBCONTRACTOR SHALL ALSO CONFIRM THE ELECTRICAL CHARACTERISTICS OF THE PROJECT AND ORDER EQUIPMENT ACCORDINGLY.
 3.2. SPECIAL CARE SHALL BE TAKEN IN THE INSTALLATION OF ALL WORK, TO SEE THAT THEY ALL COME WITHIN THE LIMITS ESTABLISHED BY THE FINISH LINES OF ALL WALLS, FLOORS, CEILINGS, ETC.
 3.3. THIS SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AND OTHER SUBCONTRACTORS WHO ARE CONCERNED, OF ALL OPENINGS, FOUNDATION WORK, HANGERS, INSERTS, ANCHORS, OR OTHER PROVISIONS NECESSARY IN THEIR WORK FOR THE INSTALLATION OF THE SUBCONTRACTORS WORK, AND THEY SHALL FURNISH ALL INFORMATION AND NECESSARY MATERIALS IN AMPLE TIME SO THAT PROPER PROVISIONS CAN BE MADE FOR SAME, AND SHALL SUPPLY AND CORRECTLY AND ACCURATELY PLACE ALL INSERTS, SLEEVES, ANCHORS, ETC.
 3.4. FAILURE TO COMPLY WITH THESE REQUIREMENTS ON THE PART OF THIS SUBCONTRACTOR WILL RENDER THEM RESPONSIBLE FOR THE COST OF CUTTING OPENINGS, INSTALLING HANGERS AND OTHER PROVISIONS AT A LATER DATE, AND THE SUBSEQUENT PATCHING, ETC., THEREBY REQUIRED.
 3.5. NO CUTTING SHALL BE DONE WITHOUT PERMISSION. ALL SUCH WORK SHALL BE DONE BY TRADES-PERSONS SKILLED IN AND CERTIFIED FOR THIS PARTICULAR TRADE.
 3.6. EACH SUBCONTRACTOR IS TO BE AN EXPERT IN THEIR TRADE.

4. REQUIREMENTS OF INSPECTION DEPARTMENTS
 4.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ELECTRICAL EQUIPMENT SUPPLIED MUST CONFORM TO THE REGULATIONS OF CSA AND THE LOCAL UTILITY. ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNERS IF IT REASONABLY COULD HAVE BEEN FORESEEN WHEN TENDERING.
 4.2. EACH SUBCONTRACTOR SHALL PREPARE DRAWINGS IN ADDITION TO ENGINEER'S DRAWINGS AS MAY BE REQUIRED BY VARIOUS INSPECTION DEPARTMENTS HAVING JURISDICTION, AND OBTAIN THEIR APPROVAL BEFORE PROCEEDING WITH THE WORK.
 4.3. IN THE EVENT THAT THE INSPECTION DEPARTMENT'S REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT, THE SUBCONTRACTOR SHALL CONSULT ENGINEER BEFORE PROCEEDING WITH THE SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWINGS ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.

5. CERTIFICATES, PERMITS, FEES
 5.1. SUBCONTRACTORS SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES INCLUDING PAYMENT FOR STREET CONNECTIONS TO STORM, SANITARY, WATER AND GAS IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT AND THEY SHALL FURNISH ANY CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE MUNICIPALITY AND PROVINCE.

6. GUARANTEE
 6.1. THIS SUBCONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND TYPE OBTAINABLE TO GIVE FIRST-CLASS CONSTRUCTION AND PROPER EFFICIENT OPERATION, AND FREE FROM ANY DEFECTS. ANY SUCH DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF THEIR WORK, SHALL BE REPAIRED AND REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. WHERE SUCH DEFECTS OCCUR, THIS SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING THE DEFECTIVE WORK GOOD. THIS SHALL NOT OBSOLETE ANY LONGER WARRANTIES ON SPECIFIC ITEMS OF EQUIPMENT.
 6.2. ALL INJURIES TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES OR OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT, CAUSED BY SUCH DEFECTS OF THIS SUBCONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENT AND REPAIR, SHALL BE MADE GOOD AT THE EXPENSE OF THIS SUBCONTRACTOR. ALL REPAIR WORK SHALL BE DONE BY TRADES RESPONSIBLE FOR THE ORIGINAL WORK.

7. DRAWINGS
 7.1. THE DRAWINGS SHOW THE APPROXIMATE LOCATION FOR SPECIAL APPARATUS AND THE MATERIALS THROUGHOUT THE BUILDING. THE ARRANGEMENT SHOWN ON THE DRAWING IS MORE OR LESS DIAGRAMMATIC AND AS SUCH APPROXIMATE ONLY, AND MAY BE ALTERED, AS APPROVED BY THE ENGINEER, TO MEET REQUIREMENTS OF THE APPARATUS, ETC., AND OF THE BUILDING. EACH SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MEASUREMENTS FOR THEIR WORK THROUGHOUT, AND THEY SHALL ARRANGE THEIR PIPING, WIRING AND APPARATUS TO CONFORM TO THE ARCHITECTURAL AND STRUCTURAL DETAILS IN A SATISFACTORY MANNER AND SHALL CO-OPERATE WITH OTHER CONTRACTORS TO ENSURE THAT WORK SHALL MEET ALL REQUIREMENTS OF DIVERSE CONTRACTS.
 7.2. ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED BUT NOT SHOWN SHALL BE INCLUDED.
 7.3. ITEMS OBVIOUSLY REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM BUT NOT SPECIFIED NOR SHOWN SHALL BE INCLUDED.

8. RESPONSIBILITY AND LIABILITY
 8.1. EACH SUBCONTRACTOR SHALL SUPERVISE THE LAYING OUT OF THEIR WORK AND SHALL ARRANGE IT IN CO-OPERATION WITH OTHER WHO MAY BE WORKING ON THE PREMISES WHILE THE WORK OF THIS CONTRACT IS IN PROGRESS. THEY SHALL PROTECT FINISHED AND UNFINISHED WORK OF THIS CONTRACT AND/OR WORK OF OTHERS ON THE PREMISES UNTIL THE COMPLETED WORK HAS BEEN ACCEPTED.
 8.2. THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND IN THE DRAWINGS OR SPECIFICATIONS BEFORE SUBMITTING THEIR TENDER. THEY SHALL ABIDE BY DECISIONS GIVEN TO THEM IN WRITING WITH REGARD TO SAME. EACH SUBCONTRACTOR IS CAUTIONED THAT THE WORK AS SHOWN IS INTENDED TO BE COMPLETE IN ALL RESPECTS AND THAT FAILURE ON THEIR PART TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.

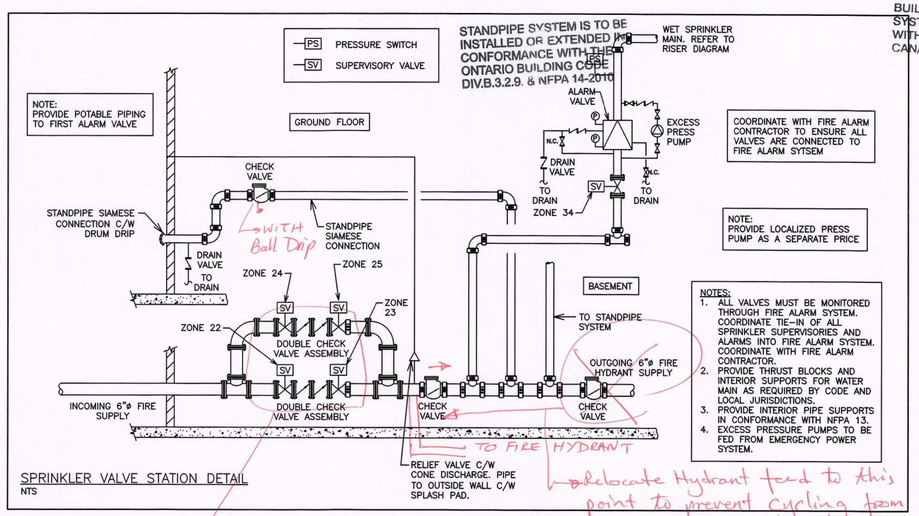
9. CLEAN-UP
 9.1. DURING THE COURSE OF CONSTRUCTION, EACH SUBCONTRACTOR SHALL KEEP THEIR WORK TIDY AND NOT ALLOW AN ACCUMULATION OF DEBRIS RESULTING FROM THEIR WORK.
 9.2. UPON COMPLETION OF THEIR WORK THEY SHALL LEAVE THE PREMISES IN A BROOM-CLEAN CONDITION.

10. PROTECTION
 10.1. SUBCONTRACTORS ARE TO PROTECT THEIR WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT AND FIXTURES TO PREVENT OBSTRUCTIONS.

11. ELECTRICAL WIRING AND CONTROLS
 11.1. ALL POWER WIRING FOR MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL DIVISION. THE MECHANICAL TRADE INVOLVED SHALL PROVIDE STARTERS, THERMOSTATS, VALVES, CONTROL TRANSFORMERS, RELAYS, ETC. ALL CONTROL WIRING SHALL BE DONE BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED ELSEWHERE IN THIS SPECIFICATION.

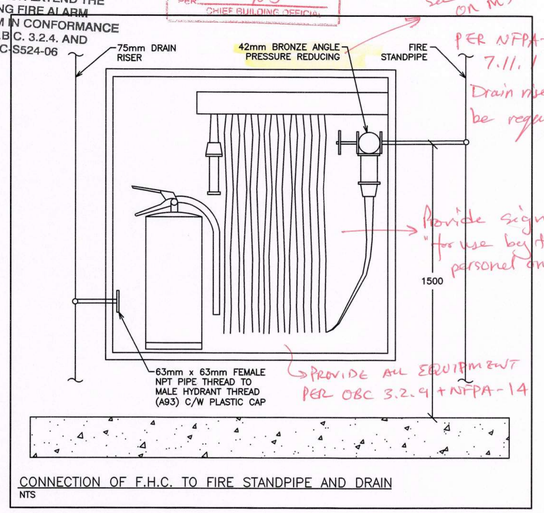
SPRINKLER NOTES:

1. CONFIRM CONDITIONS PRIOR TO PRICING AND INSTALLATION.
2. PROVIDE WET SYSTEM FOR BUILDING.
3. PROVIDE VALVES, HEADS, AND PIPING AS REQUIRED FOR A COMPLETE AND OPERATIONAL SPRINKLER SYSTEM IN CONFORMANCE WITH NFPA 13-2013 AND LOCAL CODES.
4. PROVIDE FIRE EXTINGUISHERS AS PER DRAWINGS, NFPA 10, AND AS REQUIRED BY LOCAL FIRE PREVENTION SERVICES. ALLOW FOR FOUR (4) ADDITIONAL FIRE EXTINGUISHERS, FROM THAT SHOW ON DRAWINGS AND TO BE LOCATED AT THE DISCRETION OF THE FIRE PREVENTION SERVICES.
5. SPRINKLER CONTRACTOR TO COORDINATE WITH GRILLE, AND LIGHT LOCATIONS AND WITH MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO LOCATING SPRINKLER HEADS. CONTRACTOR IS TO VERIFY HEAD LAYOUT ON SITE TO ENSURE ADEQUATE COVERAGE AS PER NFPA 13-2013.
6. CONTRACTOR SHALL DETERMINE BEST ROUTING OF SPRINKLER PIPING BY COORDINATING WITH ALL DRAWINGS. REFER SPECIFICALLY TO M1-PLUMBING, M2-DUCTWORK AND GAS PIPING. COORDINATE WITH ALL OTHER TRADES ON SITE PRIOR TO INSTALLATION OF PIPING.
7. CONCEAL ALL NEW PIPING IN CEILING SPACE OR BULKHEADS.
8. PROVIDE LOCKABLE ACCESS DOORS IN DROPPED DRYWALL CEILINGS AND WALLS FOR ACCESS TO VALVES, ETC. WHERE REQUIRED.
9. COORDINATE INTERLOCK OF SPRINKLER SYSTEM INTO FIRE ALARM SYSTEM WITH ELECTRICAL CONTRACTOR.
10. ALL REQUIRED CUTTING AND CORING BY SPRINKLER CONTRACTOR. ALL PATCHING BY GENERAL CONTRACTOR.
11. PROVIDE DESIGN DRAWINGS COMPLETE WITH HYDRAULIC CALCULATIONS FOR SUBMITTAL AND REVIEW BY ENGINEER AND REVIEWING AUTHORITIES.
12. SYSTEM SHALL BE TESTED AS PER SPECIFICATIONS AND WITNESSED BY THE ENGINEER.
13. COORDINATE TESTING OF DEVICES INTERLOCKED WITH FIRE ALARM SYSTEM WITH CONTRACTOR.
14. PROVIDE MATERIAL AND TEST CERTIFICATES UPON COMPLETION OF INSTALLATION AND TESTING TO ENGINEER AND REVIEWING AUTHORITIES.

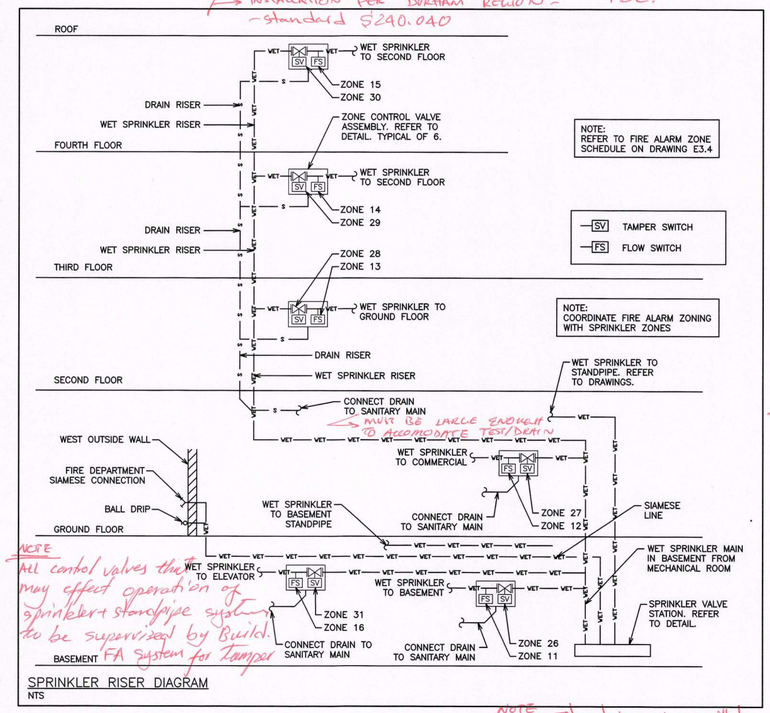


SPRINKLER VALVE STATION DETAIL
NTS

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06



CONNECTION OF F.H.C. TO FIRE STANDPIPE AND DRAIN
NTS



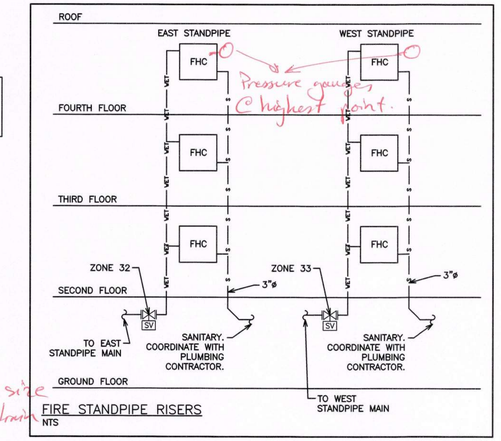
SPRINKLER RISER DIAGRAM
NTS

INSTALLATION PER DURHAM REGION - Standard S240.040

NOTE: SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIVISION B 3.2.5. AND NFPA 13-2007.

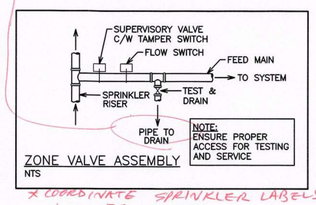
NOTE: ENTIRE BUILDING SHALL BE PROTECTED BY WITH SPRINKLER AND STANDPIPE SYSTEM.

BUILDING PERMIT # 201602195 CITY OF OSHAWA



FIRE STANDPIPE RISERS
NTS

shall be of sufficient size to accomodate test/drain



ZONE VALVE ASSEMBLY
NTS

* COORDINATE SPRINKLER LABELS WITH FA ZONES NAMES.

NOTE: standpipe riser will be required per NFPA-14, 2010, 6.1.2.2

NOTE: TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
1. DESIGN AND INSTALLATION OF SPRINKLER SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENT S OF NFPA 13-2013 EDITION, AND OBC-2012 EDITION.
2. DESIGN AND INSTALLATION OF BUILDING STANDPIPE SYSTEM SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF NFPA 14-2010 EDITION AND OBC 2012 EDITION INCLUDING LATEST AMENDMENTS.
3. PROVIDE SPRINKLER AND STAND PIPE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR OUR REVIEW PRIOR TO INSTALLATION OF PIPING FOR THESE SYSTEMS.

HAZARDS	
LIGHT HAZARD (0.1 gpm over 1500 sq.ft.)	ALL AREAS EXCEPT BELOW
ORDINARY HAZARD I (0.15 gpm over 1500 sq.ft.)	STORAGE LOCKERS, MACHINE, GARBAGE, MECHANICAL AND ELECTRICAL ROOMS

* sprinkler/standpipe shop drawings & hydraulic calc.s will be required for review prior to systems installation.

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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ON
PETER HOOGER

MECHANICAL SPRINKLER NOTES & DETAILS

D.G. Biddle & Associates Limited
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INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100139545 Sept 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115147
DRAWN BY:	B.C.A	DRAWING NO.	M3.6
DESIGN BY:	B.C.A/G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115147 M
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOT TO SCALE

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN CONFORMANCE WITH PART 6 OF THE ONTARIO FIRE CODE.

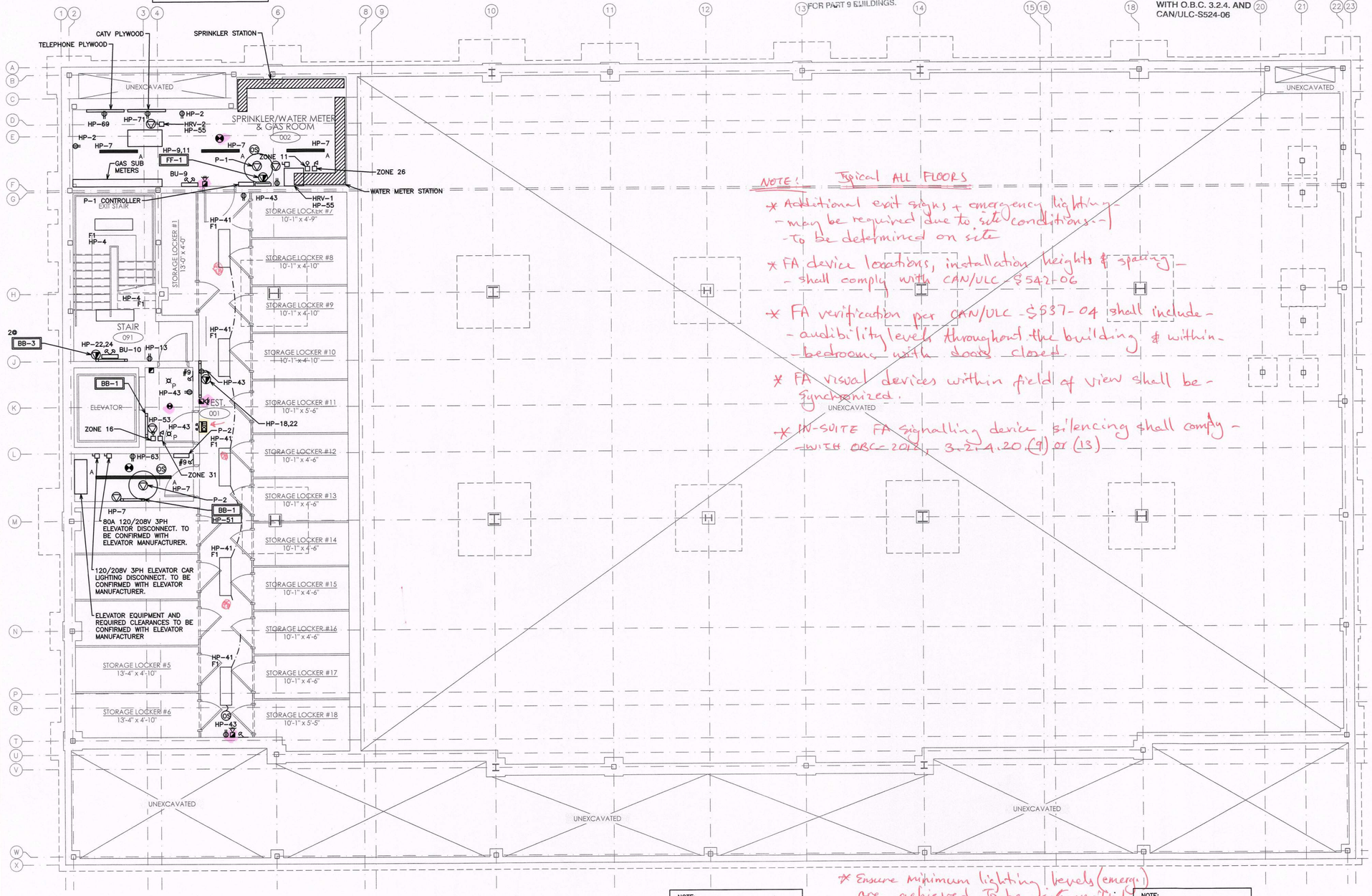
SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.5. & NFPA 13-2013

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

STANDPIPE SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.9. & NFPA 14-2010

NOTE:
CONTRACTOR TO PROVIDE 2"ø EMPTY CONDUIT C/W PULL STRING TO EACH RETAIL SUITE.



NOTE: Typical ALL FLOORS

* Additional exit signs + emergency lighting - may be required due to site conditions. - To be determined on site
* FA device locations, installation heights & spacing - shall comply with CAN/ULC-S542-06
* FA verification per CAN/ULC-S537-04 shall include - audibility levels throughout the building & within - bedrooms with doors closed
* FA visual devices within field of view shall be - synchronized.
* IN-SUITE FA signalling device silencing shall comply - with OBC-2012, 3.2.4.20.(9) or (13)
* Ensure minimum lighting levels (emerg.) are achieved. To be site verified.

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

NOTE:
EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

NOTE:
FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE:
CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

See E1, E2, E3

NOTE:
COORDINATE SHARED SPACES WITH MECHANICAL CONTRACTORS.

NOTE:
CONTRACTOR TO PROVIDE 4' FLUORESCENT FIXTURE AND DUPLEX GFCI OUTLET IN ELEVATOR PIT.

NOTE:
LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

NOTE:
ALL SWITCHES AND CONTROLS WITHIN BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c).

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER: CHIEF BUILDING OFFICIAL

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA
PETER HOOGER

ELECTRICAL BASEMENT LAYOUT

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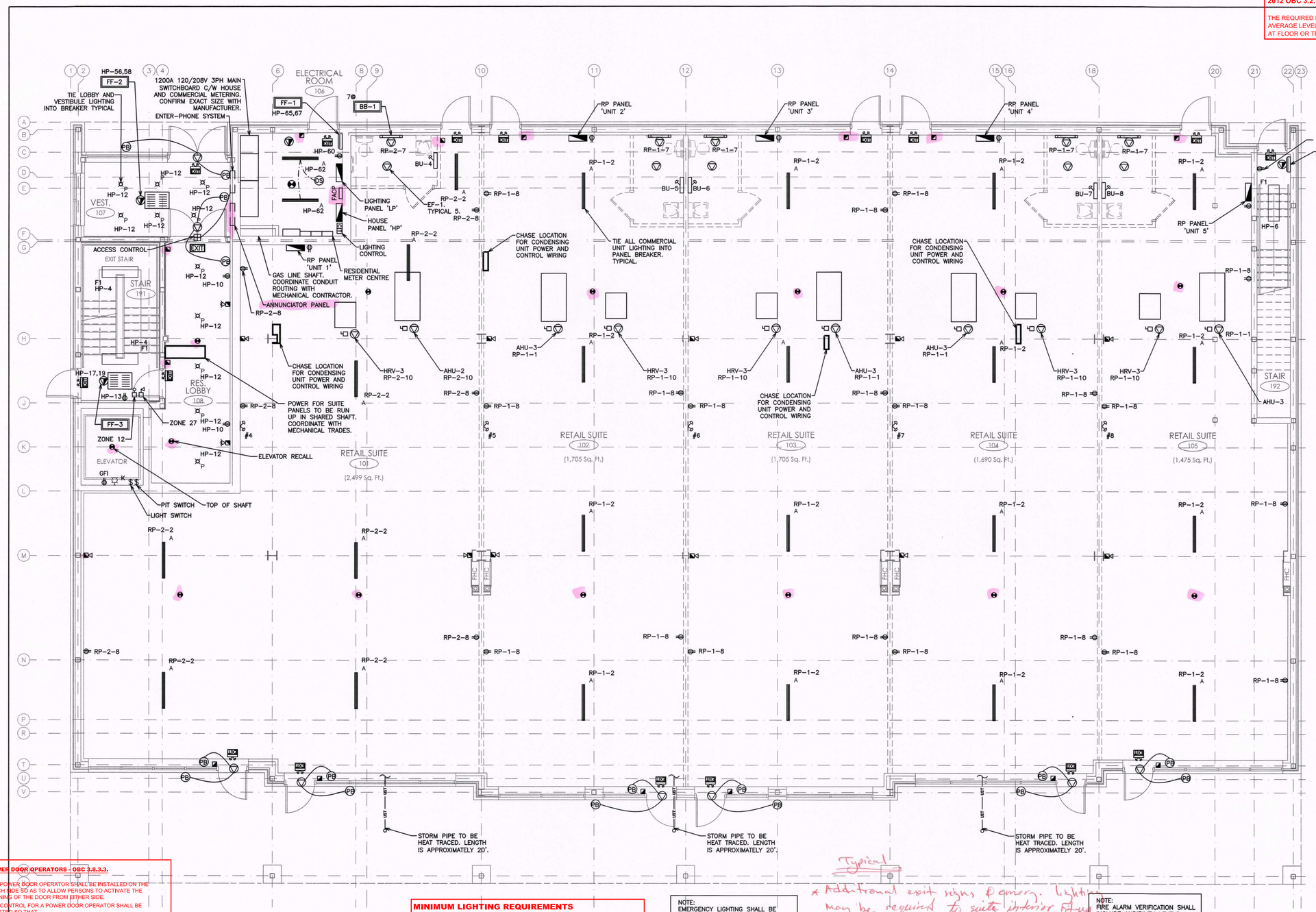
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 DEC 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115705
DRAWN BY:	C.P.D.	DRAWING NO.	E1
DESIGN BY:	C.P.D./G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115705 E
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOT TO SCALE



MINIMUM EMERGENCY LIGHTING REQUIREMENTS 2012 OBC 3.2.7.3. AND 9.9.12.3.

THE REQUIRED EMERGENCY LIGHTING SHALL HAVE AN AVERAGE LEVEL NOT LESS THAN 10 LX (0.9 FT. - CANDLES) AT FLOOR OR TREAD LEVEL.

CORPORATION OF THE CITY OF OSHAWA
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APR 03 2020
PER: CHIEF BUILDING OFFICIAL

BUILDING PERMIT # 201602195 CITY OF OSHAWA

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

NOTE: COORDINATE SHARED SPACES WITH MECHANICAL CONTRACTORS.

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

NOTE: PROVIDE HEAT TRACING AS INDICATED ON PLUMBING DRAWINGS

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
PER: CHIEF BUILDING OFFICIAL

NOTE: LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

EXIT SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH THE ONTARIO BUILDING CODE, SUBSECTION 3.4.5. & 9.9.11.

NOTE: ALL SWITCHES AND CONTROLS WITHIN BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c).

POWER DOOR OPERATORS - OBC 3.8.3.3.

THE POWER DOOR OPERATOR SHALL BE INSTALLED ON THE LATCH SIDE SO AS TO ALLOW PERSONS TO ACTIVATE THE OPENING OF THE DOOR FROM EITHER SIDE.

THE CONTROL FOR A POWER DOOR OPERATOR SHALL BE LOCATED SO THAT

(A) IT'S CENTRE LOCATED NOT LESS THAN 900 MM AND NOT MORE THAN 1100 MM FROM THE FLOOR LEVEL OR GROUND, OR

(B) IT EXTENDS FROM NOT MORE THAN 200MM TO NOT LESS THAN 900MM ABOVE THE FINISHED FLOOR OR GROUND

(C) IT SHALL BE LOCATED NOT LESS THAN 600 MM AND NOT MORE THAN 1500MM BEYOND THE DOOR SWING WHERE THE DOOR OPENS TOWARDS THE CONTROL

REFER TO OBC FOR ADDITIONAL DETAILS

NOTE: TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

MINIMUM LIGHTING REQUIREMENTS OBC 3.2.7.1., 9.9.12.2. AND 9.34.2.7.

EVERY *EXIT*, *PUBLIC CORRIDOR* OR CORRIDOR PROVIDING ACCESS TO *EXIT* FOR THE PUBLIC SHALL BE EQUIPPED TO PROVIDE ILLUMINATION TO AN AVERAGE LEVEL OF NOT LESS THAN 50LX (4.6 FT-CANDLE) AT FLOOR OR TREAD LEVEL AND AT ALL POINTS SUCH AS ANGLES AND INTERSECTIONS AT CHANGES OF LEVEL WHERE THERE ARE STAIRS OR RAMPS.

ILLUMINATION OF PUBLIC AND SERVICE AREAS SHALL CONFORM TO TABLE 9.34.2.7. (MINIMUM LIGHTING RANGE BETWEEN 50 AND 500 LX).

NOTE: EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

NOTE: EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

Typical

* Additional exit signs & emerg. lighting may be required to suite interior fit-up requirements.
* All FA work to be performed by qualified persons & verified by 3rd party qualified person.

See E1 + E3

NOTE: FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE: CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ONTARIO
PETER HOOGER

ELECTRICAL MAIN FLOOR LAYOUT

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96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 Dec 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	C.P.D.
DESIGN BY:	C.P.D./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016
PROJECT NO.	115705
DRAWING NO.	E2
CAD FILE:	115705 E
PLOT DATE:	12/20/16
SUBMISSION:	PERMIT

NOT TO SCALE

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.5.9.12.3. FOR PART 9 BUILDINGS.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

NOTE: COORDINATE ALL DEVICE MOUNTING HEIGHTS WITH O.B.C. AND ALL OTHER CODES AND REGULATIONS. ENSURE ADEQUATE CLEARANCES FROM BULKHEADS AND CEILINGS.

TIE STAIRWELL LIGHTING INTO BREAKER. TYPICAL

TOP OF SHAFT. TYPICAL 2.

NOTE: CONTRACTOR TO PROVIDE SWITCH AND UNDER CABINET LIGHTING FOR EACH SUITE KITCHEN. LIGHT FIXTURE TO BE EQUAL TO COOPER LIGHTING MODEL UC2418117.

NOTE: COORDINATE SHARED SPACES WITH MECHANICAL CONTRACTORS.

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APR 03 2020
PER: CHIEF BUILDING OFFICIAL

NOTE: LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

BUILDING PERMIT # 201602195 CITY OF OSHAWA

NOTE: ALL SWITCHES AND CONTROLS WITHIN BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c).

NOTE:
1. SMOKE ALARMS SHALL BE INSTALLED WITH PERMANENT CONNECTION TO AN ELECTRICAL CIRCUIT.
2. NO DISCONNECT SWITCH BETWEEN SMOKE ALARM AND CIRCUIT BREAKER.
3. SMOKE ALARMS TO HAVE BATTERY BACKUP.
4. PROVIDE A CARBON MONOXIDE (CO) ALARM IN EACH SUITE NEAR A BEDROOM.

Typical

$ smoke alarms within same suite - shall be interconnected. 6 - Equipped with strobes.

NOTE: TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE: EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

NOTE: EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

NOTE: FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE: CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

FA - Visual signaling devices as well as audible ones shall be provided in living area of every residential suite. NOTE Typical every suite.

See E1+E2+E3

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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ONTARIO
PETER HOOGER

ELECTRICAL SECOND FLOOR LAYOUT

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INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100139545 Dec 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	C.P.D.
DESIGN BY:	C.P.D./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016
PROJECT NO.	115705
DRAWING NO.	E3
CAD FILE:	115705 E
PLOT DATE:	12/20/16
SUBMISSION:	PERMIT

NOT TO SCALE

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

CORPORATION OF THE CITY OF OSHAWA
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APR 03 2020
PER _____ CHIEF BUILDING OFFICIAL

NOTE:
COORDINATE ALL DEVICE MOUNTING HEIGHTS WITH O.B.C. AND ALL OTHER CODES AND REGULATIONS. ENSURE ADEQUATE CLEARANCES FROM BULKHEADS AND CEILINGS.

TIE STAIRWELL LIGHTING INTO BREAKER. TYPICAL.

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

TOP OF SHAFT. TYPICAL 2.

NOTE:
CONTRACTOR TO PROVIDE SWITCH AND UNDER CABINET LIGHTING FOR EACH SUITE KITCHEN. LIGHT FIXTURE TO BE EQUAL TO COOPER LIGHTING MODEL UC24T8117.

NOTE:
COORDINATE SHARED SPACES WITH MECHANICAL CONTRACTORS.

NOTE:
LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOTE:
ALL SWITCHES AND CONTROLS WITHIN BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c).

NOTE:
1. SMOKE ALARMS SHALL BE INSTALLED WITH PERMANENT CONNECTION TO AN ELECTRICAL CIRCUIT.
2. NO DISCONNECT SWITCH BETWEEN SMOKE ALARM AND CIRCUIT BREAKER.
3. SMOKE ALARMS TO HAVE BATTERY BACKUP.
4. PROVIDE A CARBON MONOXIDE (CO) ALARM IN EACH SUITE NEAR A BEDROOM.

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

NOTE:
EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

NOTE:
FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE:
CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

See E1+E2+E3

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3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ONTARIO
PETER HOOGER

ELECTRICAL THIRD FLOOR LAYOUT

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
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LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 Dec 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115705
DRAWN BY:	C.P.D.	DRAWING NO.	E4
DESIGN BY:	C.P.D./G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115705 E
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOT TO SCALE

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B 3.2.7.3.(1) OR DIV. B 9.9.12.3. FOR PART 9 BUILDINGS.

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER: CHIEF BUILDING OFFICIAL

NOTE:
COORDINATE ALL DEVICE MOUNTING HEIGHTS WITH O.B.C. AND ALL OTHER CODES AND REGULATIONS. ENSURE ADEQUATE CLEARANCES FROM BULKHEADS AND CEILINGS.

TIE STAIRWELL LIGHTING INTO BREAKER. TYPICAL

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

TOP OF SHAFT. TYPICAL 2.

NOTE:
CONTRACTOR TO PROVIDE SWITCH AND UNDER CABINET LIGHTING FOR EACH SUITE KITCHEN. LIGHT FIXTURE TO BE EQUAL TO COOPER LIGHTING MODEL UC24T8117.

NOTE:
COORDINATE SHARED SPACES WITH MECHANICAL CONTRACTORS.

NOTE:
LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOTE:
ALL SWITCHES AND CONTROLS WITHIN BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c).

NOTE:
1. SMOKE ALARMS SHALL BE INSTALLED WITH PERMANENT CONNECTION TO AN ELECTRICAL CIRCUIT.
2. NO DISCONNECT SWITCH BETWEEN SMOKE ALARM AND CIRCUIT BREAKER.
3. SMOKE ALARMS TO HAVE BATTERY BACKUP.
4. PROVIDE A CARBON MONOXIDE (CO) ALARM IN EACH SUITE NEAR A BEDROOM.

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

NOTE:
EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

See SHEET E3

NOTE:
FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE:
CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ONTARIO
PETER HOOGER

ELECTRICAL FOURTH FLOOR LAYOUT

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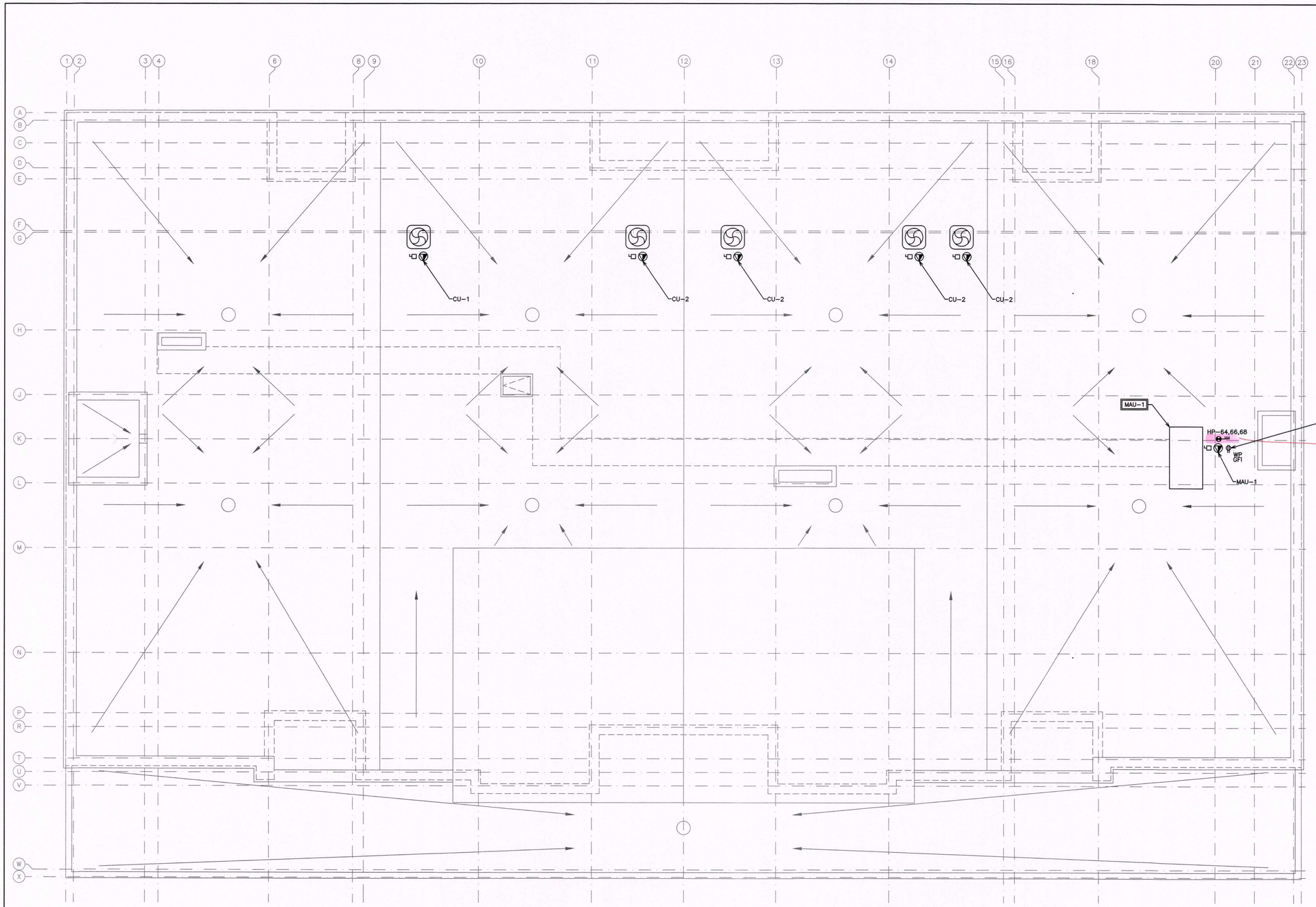
LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136545 Dec 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115705
DRAWN BY:	C.P.D.	DRAWING NO.	E5
DESIGN BY:	C.P.D./G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE:	115705 E
DATE:	DECEMBER 2016	PLOT DATE:	12/20/16
		SUBMISSION:	PERMIT

NOT TO SCALE



EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

NOTE:
EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

NOTE:
COORDINATE SHARED SPACES WITH MECHANICAL CONTRACTORS.

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
PER _____
CHIEF BUILDING OFFICIAL

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
APR 03 2020
PER:
CHIEF BUILDING OFFICIAL

PROVIDE MAINTENANCE RECEPTACLES AS PER ONTARIO ELECTRICAL CODE

Duct type SD.

NOTE:
LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NOTE:
ALL SWITCHES AND CONTROLS WITHIN BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c).

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

NOTE:
FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE:
CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100136545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115705
DRAWN BY:	C.P.D.	DRAWING NO.	E6
DESIGN BY:	C.P.D./G.V.W.O.	CAD FILE: 115705 E	
CHECKED BY:	G.V.W.O.	PLOT DATE: 12/20/16	
DATE:	DECEMBER 2016	SUBMISSION: PERMIT	

NOT TO SCALE

POWER LEGEND	
	RECEPTACLE
	240V 1PH GROUNDED RECEPTACLE
	VOICE AND DATA WALL BOX, OUTLET & 3/4" CONDUIT C/W PULL STRING UP WALL BACK TO SOURCE
	VOICE ONLY OUTLET BOX – WALL BOX, OUTLET & 3/4" CONDUIT C/W PULL STRING UP WALL BACK TO SOURCE
	DATA ONLY OUTLET BOX – WALL BOX, OUTLET & 3/4" CONDUIT C/W PULL STRING UP WALL BACK TO SOURCE
	120V POWER SUPPY
	208V POWER SUPPY
	ELECTRICAL PANEL
	ELECTRICAL DISCONNECT
	WALL MOUNTED TELEVISION (CABLE) OUTLET
F	KEY FOB ACCESS
GFI	GFI RATED RECEPTACLE
SC	SEPARATE CIRCUIT
WP	WEATHERPROOF

FIRE ALARM LEGEND	
	SMOKE DETECTOR
	FIRE ALARM STROBE (SUITE)
	FIRE ALARM COMBINATION HORN/STROBE (CORRIDOR)
	FIRE ALARM HORN (SUITE)
	FIRE ALARM HORN (CORRIDOR)
	HEAT DETECTOR
	FIRE ALARM PULL STATION
FACP	FIRE ALARM CONTROL PANEL
	COMBINATION SMOKE ALARM AND CARBON MONOXIDE DETECTOR INTERCONNECTED WHEN MORE THAN ONE PER UNIT C/W BATTERY BACKUP AND VISUAL SIGNALING COMPONENT– SUITES
	SMOKE ALARM INTERCONNECTED WHEN MORE THAN ONE PER UNIT C/W BATTERY BACKUP AND VISUAL SIGNALING COMPONENT – SUITES
	SUPERVISOR VALVE
	SPRINKLER FLOW SWITCH
	DUCT SMOKE DETECTOR

LIGHTING LEGEND	
$ ^{3}	SINGLE POLE, SINGLE THROW TOGGLE SWITCH, ONE, TWO, OR THREE GANGED ('3' DENOTES 3–WAY)
A	SUSPENDED STRIP LIGHT LIGHT 4' FLUORESCENT FIXTURE, STANDARD LENS, ELECTRONIC BALLAST, 2–T8 TUBES, 120V/1PH
WS	WALL SCONCE, 2–26W QUAD TUBE, 120V, 3000K COLOUR TEMPERATURE EQUAL TO LITHONIA LIGHTING AVANTE WALL SCONCE MODEL AVSF–2–26DTT–MDR–120
F1	SURFACE MOUNTED 2x4 FLUORESCENT FIXTURE, 2 LAMP, ELECTRONIC BALLAST, 120V/1PH EQUAL TO LUMAX LIGHTING MODEL SL23231E09CL
K	SINGLE BULB, WATER RESISTANT FIXTURE
L1	CEILING MOUNTED 1–60W LIGHT FIXTURE EQUAL TO THOMAS LIGHTING MODEL 613035W–W
L2	CEILING MOUNTED 1–60W LIGHT FIXTURE EQUAL TO THOMAS LIGHTING MODEL 613330BN
L3	CEILING MOUNTED 2–60W LIGHT FIXTURE EQUAL TO THOMAS LIGHTING MODEL 613333BN
L4	CEILING MOUNTED 3–60W LIGHT FIXTURE EQUAL TO THOMAS LIGHTING MODEL 613335BN
TL	3–LIGHT TRACK LIGHTING FIXTURE EQUAL TO GALAXY LIGHTING MODEL 754173BN/FR
P	RECESSED 125mmø LED DOWNLIGHT, 1000 LUMENS, 3000K COLOUR TEMPERATURE EQUAL TO PHILIPS LIGHTING MODEL L6RAEUVA–L6R15830VA–L6ROD
WP	WATERPROOF 100mmø SHOWER POT LIGHT EQUAL TO COOPER LIGHTING TRIM MODEL 951PS AND HOUSING MODEL H99ICAT
V	VANITY LIGHT FIXTURE EQUAL TO THOMAS MODEL PL758478L
OS	OCCUPANCY SENSOR
	SWITCHWIRING
EXIT EXIT	EXIT SIGN, EXIT SIGN WITH EMERGENCY LIGHTING EQUAL TO LUMACELL LA, LAC WITH BACK–UP BATTERY PACK
##	DOUBLE HEAD EMERGENCY LIGHT EQUAL TO LUMACELL MQM2LD10
##	SINGLE HEAD EMERGENCY LIGHT EQUAL TO LUMACELL MQM1LD10
BU–#	BACK–UP BATTERY UNIT (REFER TO SCHEDULE)
BU–#	EMERGENCY LIGHTING WITH BACK–UP BATTERY UNIT (REFER TO SCHEDULE)

NOTE:
EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.2.7.3.

NOTE:
ALL SWITCHES AND CONTROLS WITHIN BARRIER–FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(c)

NOTE:
LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.

NOTE:
FIRE ALARM VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.

NOTE:
INSTALL THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 212 3.2.4. AND CAN/ULC–S524–6.

NOTE:
EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. 2012 DIVISION B 3.4.5.1.

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV. B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

GENERAL ELECTRICAL NOTES

1. GENERAL:
 1.1. ARRANGE FOR ESA INSTALLATION PERMIT AND INSPECTION AND FORWARD A COPY OF THE ESA CERTIFICATE TO THE ENGINEER UPON ACCEPTANCE.
 1.2. ENSURE THAT ALL ELECTRICAL EQUIPMENT SUPPLIED BY OTHER TRADES IS SUITABLE FOR THE RESPECTIVE VOLTAGE. CONFIRM POWER REQUIREMENTS OF ALL OWNER SUPPLIED EQUIPMENT.
 1.3. ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT Y THIS DIVISION. NO CHASING BLOCKWORK WILL BE ALLOWED. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.
 1.4. SUBMIT 4 COPIES OF SHOP DRAWINGS FOR REVIEW AND RECORDS.
 1.5. ALL MATERIALS USED THROUGHOUT SHALL BE NEW, OF BEST QUALITY C.S.A. APPROVED AND OF ONE MANUFACTURE. WHEREVER TRADE NAMES ARE NOT USED TO DESCRIBE MATERIALS, THESE MATERIALS SHALL BE OF BEST AVAILABLE QUALITY AND MANUFACTURE. OBTAIN AND PAY FOR SPECIAL HYDRO INSPECTION OF SPECIFIED NON–C.S.A. ELECTRICAL EQUIPMENT.
 1.6. PROVIDE ALL CONDUIT, WIRING, BOXES, SWITCHES, OUTLETS, DEVICES, ETC., AS REQUIRED. MAKE FINAL CONNECTIONS TO VIBRATING EQUIPMENT WITH FLEXIBLE CONDUIT.
 1.7. PROVIDE ALL HANGERS, INSERTS AND SUPPORTS OF APPROVED TYPES REQUIRED FOR THE WORK OF THIS DIVISION. PROVIDE CONDUIT FOR ALL SERVICES PENETRATING THE FLOOR SLAB. SEAL ALL PENETRATIONS THROUGH FLOOR SLABS WITH AN APPROVED NON–SHRINK, WATERPROOF AND FIREPROOF SEALANT APPROVED BY ARCHITECT. NO CONDUITS OR EQUIPMENT SHALL BE MOUNTED DIRECTLY FROM ROOF DECK. PROVIDE ALL NECESSARY UNISTRUT OR OTHER MOUNTING DETAILS TO ENABLE SUPPORT FROM TOP CHORD OF JOISTS.
 1.8. ALL CONDUIT SHALL BE RIGID STEEL THICK WALLED OR EMT THINWALL WITH STEEL SET SCREW COUPLINGS AND CONNECTORS WITH INSULATED THROATS UNLESS OTHERWISE NOTED. EXPOSED CONDUITS AND WIREMOLD CHANNELS SHELL BE NEAT IN APPEARANCE, RUN PARALLEL TO BUILDING LINES AND CONCENTRIC RIGHT ANGLE BENDS ONLY SHALL BE USED.
 1.9. ALL EMPTY CONDUITS SHALL BE COMPLETE WITH NYLON FISH WIRE.
 1.10. ALL WIRING SHALL BE MINIMUM #12 GAUGE COPPER, EXCEPT AS OTHERWISE NOTED. ALL WIRING SHALL BE 600 VOLT TYPE RW90. BX CABLE MAY BE USED WHERE PERMITTED BY CODE IN CEILING SPACE FOR FINAL CONNECTION TO LIGHT FIXTURE AND FROM CEILING DISTRIBUTION BOXES DOWN PARTITIONS TO RECEPTACLES ONLY. MINIMUM SIZE WIRING FOR DC WIRING SHALL BE #10 GAUGE. MAXIMUM VOLTAGE DROP SHALL NOT EXCEED 2 PERCENT.
 1.11. PROVIDE GROUND WIRES WITH ALL FEEDERS AND CIRCUITS IN ACCORDANCE WITH APPLICABLE CODES AND HYDRO REQUIREMENTS. PROVIDE MAIN GROUND TO HYDRO APPROVAL.
 1.12. CO–ORDINATE WITH OTHER TRADES IN LAYING OUT OF THE WORK SO AS NOT TO CONFLICT WITH THE WORK OF OTHER TRADES. CARRY OUT WORK PROMPTLY WHICH MAY INTERFERE WITH THE WORK SCHEDULE OF OTHER TRADES.
 1.13. MECHANICAL TRADES WIRING: PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN. ALL MOTORS, STARTERS AND CONTROL WIRING PROVIDED UNDER DIVISION 15. INSTALL ALL STARTERS AND WIRE COMPLETE.
 1.14. CLEARLY MARK ALL EXPOSED CONDUIT, PULL BOXES, JUNCTION BOXES, ETC., TO INDICATE THE NATURE OF THE SERVICE.
 1.15. INSTALL ALL LIGHTING AND POWER CIRCUITS TO MEET CODES.
 1.16. PROVIDE LAMACOID NAMEPLATES AND TYPEWRITTEN DIRECTORIES FOR ALL PANELS.
 1.17. CLEAN AND TEST ALL EQUIPMENT BEFORE FINAL ACCEPTANCE IS GIVEN FOR THE WORK.
 1.18. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLECT.
2. MATERIALS
 2.1. COVER PLATES:
  2.1.1. COVER PLATES FOR RECEPTACLES, SWITCHES, PILOT LIGHTS, TELEPHONE OUTLETS AND OTHER DEVICES REQUIRING COVER PLATES FOR FLUSH MOUNTED BOXES SHALL BE METAL, STAINLESS STEEL #18–8,TYPE 302, UNLESS OTHERWISE NOTED.
  2.1.2. WEATHERPROOF COVER PLATES SHALL BE DIECAST CORROSION RESISTANT ALUMINUM TYPE WITH TWO SEPARATE LIDS FOR DUPLEX RECEPTACLES SUITABLE FOR MOUNTING ON F.S. TYPE BOXES. ALL WEATHERPROOF COVER PLATES SHALL HAVE RUBBER OR NEOPRENE GASKETS.
  2.1.3. PLATES FOR SURFACE MOUNTED CAST BOXES SHALL BE GALVANIZED FORMED STEEL TYPE. COVER PLATES FOR FLUSH MOUNTED EQUIPMENT SHALL BE SUPPLIED OF QUALITY AND PERFORMANCE SPECIFIED BY THE MANUFACTURER OF THE EQUIPMENT.
  2.1.4. COVER PLATES SHALL NOT CARRY MANUFACTURER'S NAME.
  2.1.5. COVER PLATES OF QUALITY SPECIFIED SHALL BE PASS & SEYMOUR, BRYANT LEVITON, SMITH & STONE OR HARVEY HUBBELL.
 2.2. LIGHT SWITCHES:
  2.2.1. SWITCHES SHALL BE, UNLESS OTHERWISE INDICATED, BRYANT QUIET TYPE WITH WHITE SPECIFICATION GRADE FOR 120V AND HEAVY DUTY GRADE FOR 347V. LIGHT SWITCHES OF QUALITY AS MANUFACTURED BY BRYANT, P & S, ARROW HART, LEVITON AND HUBBELL SHALL BE CONSIDERED AS ACCEPTABLE AS SPECIFIED ALTERNATES.
 2.3. RECEPTACLES:
  2.3.1. RECEPTACLES SHALL BE, UNLESS OTHERWISE INDICATED, U GROUND TYPE, WHITE SCREW TERMINAL TYPE.
  2.3.2. RECEPTACLES SHALL BE SPECIFICATION GRADE.
  2.3.3. CONFIRM ALL LOCATIONS AND OUTLETS PRIOR TO INSTALLATION. ALLOW TO RELOCATE ANY OUTLET WITHIN 10'–0" OF SPECIFIED LOCATION, PRIOR TO INSTALLATION.
  2.3.4. PROVIDE ALL CONCRETE WORK REQUIRED FOR ELECTRICAL WORK IN ACCORDANCE WITH ARCHITECTURAL DIVISION OF SPECIFICATION.
 2.4. DISCONNECTS:
  2.4.1. DISCONNECT SWITCHES FOR HVAC EQUIPMENT MUST BE INSTALLED WITHIN 10'.
  2.4.2. MOTORS OTHER THAN AIR CONDITIONERS MUST HAVE DISCONNECT WITHIN SIGHT AND 30' OF THE MOTOR AND/OR STARTER.
 2.5. CONDUITS:
  2.5.1. EMT (ELECTRICAL METALLIC TUBING) MUST BE USED IN THE FOLLOWING INDOOR APPLICATIONS:
   2.5.1.1. ALL EXPOSED AREAS (USE WIREMOLD ON EXPOSED WALLS IN FINISHED AREAS WHERE EXPOSED WIRING HAS BEEN APPROVED).
   2.5.1.2. T–BAR CEILING SPACES
   2.5.1.3. ATTIC SPACES
   2.5.1.4. CRAWL SPACES
  2.5.2. LIQUIDTIGHT MUST BE USED IN THE FOLLOWING INDOOR AND OUTDOOR APPLICATIONS:
   2.5.2.1. LAST 5' FOR FINAL CONNECTION TO INDOOR MECHANICAL EQUIPMENT
   2.5.2.2. ALL OUTDOOR WIRING
  2.5.3. FLEXIBLE CABLE IS ONLY ACCEPTABLE IN THE FOLLOWING INDOOR APPLICATIONS:
   2.5.3.1. LAST 5' FOR FINAL CONNECTION TO LIGHTING AND SMALL EQUIPMENT/COMPONENTS IN CEILING SPACES
   2.5.3.2. CONCEALED IN DRYWALL WALLS AND DRYWALL CEILINGS
   2.5.3.3. THROUGH HOLES IN CONCRETE, BRICKS OR STEEL STUDS PROVIDED IT IS NOT SUBJECT TO MECHANICAL DAMAGE.
  2.5.4. ROMEX IS AN ACCEPTABLE ALTERNATE FOR ALL INDOOR WIRING IN WOOD CONSTRUCTION BUILDINGS.
  2.5.5. WHERE CEILING SPACE IS USED AS A RETURN AIR PLENUM, ALL WIRING SHALL CONFORM TO CODES FOR THIS APPLICATION.

GENERAL REQUIREMENTS FOR ELECTRICAL WORK

1. SCOPE OF WORK
 1.1. CONFORM TO ALL DRAWINGS RELATED TO THIS PROJECT.
 1.2. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE O.B.C., ALL OTHER APPLICABLE CODES, REGULATIONS, BY–LAWS AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATION OF THE AUTHORITIES HAVING JURISDICTION. THESE CODES AND STANDARDS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.
2. EXAMINATION OF SITE AND INFORMATION
 2.1. EACH SUBCONTRACTOR, BEFORE TENDERING, SHALL EXAMINE THE SITE, THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND THEY SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT THEIR TENDER MAY INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK.
 2.2. IT SHALL BE THIS SUBCONTRACTOR'S RESPONSIBILITY THAT MATERIAL AND EQUIPMENT BE BROUGHT INTO THE BUILDING IN SUCH ASSEMBLIES AND SIZES AS TO ENTER INTO THE SPACE WHERE THEY ARE TO BE LOCATED AND TO BE SMALL ENOUGH TO BE HOISTED INTO THE BUILDING WITHOUT DIFFICULTY. ANY CUTTING, PATCHING, ETC., INVOLVED IN GETTING LARGE ASSEMBLIES INTO PLACE, SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
3. RELATIONSHIP TO OTHER TRADES
 3.1. THIS SUBCONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS INSTALLING EQUIPMENT, PIPING, OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR INSTALLATION, AND THEY SHALL ARRANGE THEIR EQUIPMENT, PIPING, ETC., IN PROPER RELATION WITH OTHER APPARATUS, AND WITH THE BUILDING CONSTRUCTION. THIS SUBCONTRACTOR SHALL ALSO CONFIRM THE ELECTRICAL CHARACTERISTICS OF THE PROJECT AND ORDER EQUIPMENT ACCORDINGLY.
 3.2. SPECIAL CARE SHALL BE TAKEN IN THE INSTALLATION OF ALL WORK, TO SEE THAT THEY ALL COME WITHIN THE LIMITS ESTABLISHED BY THE FINISH LINES OF ALL WALLS, FLOORS, CEILINGS, ETC.
 3.3. THIS SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AND OTHER SUBCONTRACTORS WHO ARE CONCERNED, OF ALL OPENINGS, FOUNDATION WORK, HANGERS, INSERTS, ANCHORS, OR OTHER PROVISIONS NECESSARY IN THEIR WORK FOR THE INSTALLATION OF THE SUBCONTRACTORS WORK, AND THEY SHALL FURNISH ALL INFORMATION AND NECESSARY MATERIALS IN AMPLE TIME SO THAT PROPER PROVISIONS CAN BE MADE FOR SAME, AND SHALL SUPPLY AND CORRECTLY AND ACCURATELY PLACE ALL INSERTS, SLEEVES, ANCHORS, ETC.
 3.4. FAILURE TO COMPLY WITH THESE REQUIREMENTS ON THE PART OF THIS SUBCONTRACTOR WILL RENDER THEM RESPONSIBLE FOR THE COST OF CUTTING OPENINGS, INSTALLING HANGERS AND OTHER PROVISIONS, AT A LATER DATE, AND THE SUBSEQUENT PATCHING, ETC., THEREBY REQUIRED.
 3.5. NO CUTTING SHALL BE DONE WITHOUT PERMISSION. ALL SUCH WORK SHALL BE DONE BY TRADES–PERSONS SKILLED IN AND CERTIFIED FOR THIS PARTICULAR TRADE.
 3.6. EACH SUBCONTRACTOR IS TO BE AN EXPERT IN THEIR TRADE.
4. SHOP DRAWINGS
 4.1. EACH SUBCONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW OF MATERIAL, EQUIPMENT, AND APPARATUS BEING PROVIDED BY THEM. THESE SHALL SHOW IN DETAIL THE DESIGN AND CONSTRUCTION AND PERFORMANCE OF ALL APPARATUS, ETC.
 4.2. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND MANUFACTURER'S SPECIFICATIONS OF ANY EQUIPMENT IS GENERAL AND IS NOT INTENDED TO SERVE AS A FINAL CHECK AND IT SHALL NOT RELIEVE THE SUBCONTRACTOR OF THE RESPONSIBILITY FOR ERRORS OR OF THE NECESSITY OF CHECKING THE DRAWINGS THEMSELVES, OR OF FURNISHING ANY OF THE MATERIALS AND PERFORMING THE WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS TO THE FULL INTENT OF THIS SPECIFICATION.
 4.3. BEFORE SUBMISSION, THIS SUBCONTRACTOR SHALL CHECK ALL SHOP DRAWINGS FOR ACCURACY OF DETAILS, DIMENSIONS, ETC. AND SHALL BE SATISFIED THAT THE DRAWINGS ARE CORRECT AND THAT THE EQUIPMENT WILL FIT PROPERLY IN THE ALLOTTED SPACE. THE SHOP DRAWINGS SHALL BE STAMPED BY THIS SUBCONTRACTOR WITH THE WORD 'REVIEWED', THE DATE OF APPROVAL, AND THE FIRM'S NAME PRIOR TO SUBMISSION.
5. REQUIREMENTS OF INSPECTION DEPARTMENTS
 5.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ELECTRICAL EQUIPMENT SUPPLIED MUST CONFORM TO THE REGULATIONS OF CSA AND THE LOCAL UTILITY. ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNERS IF IT REASONABLY COULD HAVE BEEN FORESEEN WHEN TENDERING.
 5.2. EACH SUBCONTRACTOR SHALL PREPARE DRAWINGS IN ADDITION TO ENGINEER'S DRAWINGS AS MAY BE REQUIRED BY VARIOUS INSPECTION DEPARTMENTS HAVING JURISDICTION, AND OBTAIN THEIR APPROVAL BEFORE PROCEEDING WITH THE WORK.
 5.3. IN THE EVENT THAT THE INSPECTION DEPARTMENT'S REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT, THE SUBCONTRACTOR SHALL CONSULT ENGINEER BEFORE PROCEEDING WITH THE SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWINGS ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.
6. CERTIFICATES, PERMITS, FEES
 6.1. SUBCONTRACTORS SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES INCLUDING PAYMENT FOR STREET CONNECTIONS TO STORM, SANITARY, WATER AND GAS IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT AND THEY SHALL FURNISH ANY CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE MUNICIPALITY AND PROVINCE.
7. GUARANTEE
 7.1. THIS SUBCONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND TYPE OBTAINABLE TO GIVE FIRST–CLASS CONSTRUCTION AND PROPER EFFICIENT OPERATION, AND FREE FROM ANY DEFECTS. ANY SUCH DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF THEIR WORK, SHALL BE REPAIRED AND REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. WHERE SUCH DEFECTS OCCUR, THIS SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING THE DEFECTIVE WORK GOOD. THIS SHALL NOT OBSOLETE ANY LONGER WARRANTIES ON SPECIFIC ITEMS OF EQUIPMENT.
 7.2. ALL INJURIES TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES OR OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT, CAUSED BY SUCH DEFECTS OF THIS SUBCONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENT AND REPAIR, SHALL BE MADE GOOD AT THE EXPENSE OF THIS SUBCONTRACTOR. ALL REPAIR WORK SHALL BE DONE BY TRADES RESPONSIBLE FOR THE ORIGINAL WORK.
8. DRAWINGS
 8.1. THE DRAWINGS SHOW THE APPROXIMATE LOCATION FOR SPECIAL APPARATUS AND THE MATERIALS THROUGHOUT THE BUILDING. THE ARRANGEMENT SHOWN ON THE DRAWING IS MORE OR LESS DIAGRAMMATIC AND AS SUCH APPROXIMATE ONLY, AND MAY BE ALTERED, AS APPROVED BY THE ENGINEER, TO MEET REQUIREMENTS OF THE APPARATUS, ETC., AND OF THE BUILDING. EACH SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MEASUREMENTS FOR THEIR WORK THROUGHOUT, AND THEY SHALL ARRANGE THEIR PIPING, WIRING AND APPARATUS TO CONFORM TO THE ARCHITECTURAL AND STRUCTURAL DETAILS IN A SATISFACTORY MANNER AND SHALL CO–OPERATE WITH OTHER CONTRACTORS TO ENSURE THAT WORK SHALL MEET ALL REQUIREMENTS OF DIVERSE CONTRACTS.
 8.2. THE SUBCONTRACTOR IS PARTICULARLY CAUTIONED THAT SMALL SCALE ENGINEER'S PLANS MUST BE SUPPLEMENTED BY THEIR OWN DETAIL DRAWINGS WHERE NECESSARY FOR PROPER CO–ORDINATION OF THE WORK.
 8.3. ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED BUT NOT SHOWN SHALL BE INCLUDED.
 8.4. ITEMS OBVIOUSLY REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM BUT NOT SPECIFIED NOR SHOWN SHALL BE INCLUDED.
9. RESPONSIBILITY AND LIABILITY
 9.1. EACH SUBCONTRACTOR SHALL SUPERVISE THE LAYING OUT OF THEIR WORK AND SHALL ARRANGE IT IN CO–OPERATION WITH OTHER WHO MAY BE WORKING ON THE PREMISES WHILE THE WORK OF THIS CONTRACT IS IN PROGRESS. THEY SHALL PROTECT FINISHED AND UNFINISHED WORK OF THIS CONTRACT AND/OR WORK OF OTHERS ON THE PREMISES UNTIL THE COMPLETED WORK HAS BEEN ACCEPTED.
 9.2. THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND IN THE DRAWINGS OR SPECIFICATIONS BEFORE SUBMITTING THEIR TENDER. THEY SHALL ABIDE BY DECISIONS GIVEN TO THEM IN WRITING WITH REGARD TO SAME. EACH SUBCONTRACTOR IS CAUTIONED THAT THE WORK AS SHOWN IS INTENDED TO BE COMPLETE IN ALL RESPECTS AND THAT FAILURE ON THEIR PART TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.
10. CLEAN–UP
 10.1. DURING THE COURSE OF CONSTRUCTION, EACH SUBCONTRACTOR SHALL KEEP THEIR WORK TIDY AND NOT ALLOW AN ACCUMULATION OF DEBRIS RESULTING FROM THEIR WORK.
 10.2. UPON COMPLETION OF THEIR WORK THEY SHALL LEAVE THE PREMISES IN A BROOM–CLEAN CONDITION.
11. PROTECTION
 11.1. SUBCONTRACTORS ARE TO PROTECT THEIR WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT AND FIXTURES TO PREVENT OBSTRUCTIONS.
12. ELECTRICAL WIRING AND CONTROLS
 12.1. ALL POWER WIRING FOR MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL DIVISION. THE MECHANICAL TRADE INVOLVED SHALL PROVIDE STARTERS, THERMOSTATS, VALVES, CONTROL TRANSFORMERS, RELAYS, ETC. ALL CONTROL WIRING SHALL BE DONE BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED ELSEWHERE IN THIS SPECIFICATION.

NOTE:
1. SMOKE ALARMS SHALL BE INSTALLED WITH PERMANENT CONNECTION TO AN ELECTRICAL CIRCUIT.
2. NO DISCONNECT SWITCH BETWEEN SMOKE ALARM AND CIRCUIT BREAKER.
3. SMOKE ALARMS TO HAVE BATTERY BACKUP.
4. PROVIDE A CARBON MONOXIDE (CO) ALARM IN EACH SUITE NEAR A BEDROOM.

NOTE:
THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND EXISTING BUILDING AND SERVICES AFFECTING THE PROPER EXECUTION OF THE WORK, AND OBTAIN A CLEAR AND COMPREHENSIVE KNOWLEDGE OF THE EXISTING CONDITIONS. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR WORK OR DIFFICULTIES ENCOUNTERED DUE TO CONDITIONS OF THE SITE WHICH WERE VISIBLE OR REASONABLY INFERABLE, PRIOR TO THE DATE OF SUBMISSION OF BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT ON THEIR PART IN THIS RESPECT.

NOTE:
TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.

NOTE:
CONNECT FIRE ALARM TO UNSWITCHED PORTION OF WASHROOM LIGHTING CIRCUIT.

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY OF PERMIT PLANS
APR 03 2020
PER: _____ CHIEF BUILDING OFFICIAL

BUILDING PERMIT # 201602195 CITY OF OSHAWA

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
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1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ONTARIO
PETER HOOGER

ELECTRICAL NOTES AND DETAILS

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PHONE (905)576–8500 • FAX (905)576–9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER G.V.W. OSBORNE 100136345 Dec 20/16 PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	C.P.D.
DESIGN BY:	C.P.D./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016
PROJECT NO.	115705
DRAWING NO.	E7
CAD FILE:	115705 E
PLOT DATE:	12/20/16
SUBMISSION:	PERMIT

NOT TO SCALE

FIRE ALARM SEQUENCE OF OPERATION

IN NORMAL MODE, THE CONTROL PANEL'S ALPHA–NUMERIC DISPLAY WILL INDICATE THE DATE, TIME, AND THE 'NORMAL CONDITION'.

SINGLE STAGE OPERATION:
IF AN ALARM IS INITIATED IN ANY AREA OF THE BUILDING BY ONE OF THE FOLLOWING:
- OPERATION OF A MANUAL PULL STATION,
- OPERATION OF AN AUTOMATIC FIRE DETECTOR,
- OPERATION OF A SPRINKLER FLOW SWITCH.

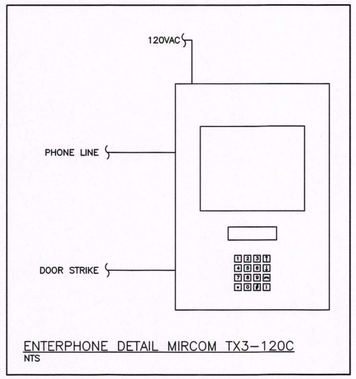
THE MAIN FIRE ALARM CONTROL PANEL SHALL INITIATE THE FOLLOWING ALARM SEQUENCE OF OPERATIONS:
- INDICATE THE POINT OF ALARM ON THE CONTROL PANEL'S ALPHA–NUMERIC DISPLAY.
- LIGHT THE RED COMMON ALARM LED INDICATOR ON THE CONTROL PANEL.
- THE REMOTE ANNUNCIATOR SHALL INDICATE THE ZONE WHERE ALARM ORIGINATED BY ILLUMINATING A CORRESPONDING LABELLED RED LED INDICATOR.
- EVERY AUDIBLE SIGNAL APPLIANCE SHALL SOUND AT A TEMPORAL RATE UNTIL MANUALLY SILENCED (MANUAL SILENCE INHIBITED DURING FIRST MINUTE OF ALARM).
- IF SILENCED, THE "SIGNAL SILENCE" LIGHT ON THE CONTROL PANEL WILL ILLUMINATE.
- IF SILENCED, A SUBSEQUENT ALARM WILL RE–ACTIVATE THE SIGNALS.
- ALL ALARM STROBE SIGNALS SHALL FLASH IN "ALARM" MODE.
- A TROUBLE INHIBIT CIRCUIT SHALL BE INITIATED TO SUPPRESS ANY TROUBLE SIGNALS DURING AN ALARM.
- TYPE, LOCATION, TIME AND DATE OF ALARM CONDITION SHALL BE RECORDED IN THE FIRE ALARM SYSTEM EVENT HISTORY.
- ALL DESIGNED FANS SHALL BE AUTOMATICALLY TURNED OFF.
- DOORS NORMALLY HELD OPEN THROUGH MAGNETIC DOOR HOLDERS SHALL BE RELEASED.
- DOORS NORMALLY LOCKED BY MAGNETIC DEVICES SHALL BE RELEASED.
- INITIATE EMERGENCY ELEVATOR RECALL IF APPLICABLE.
- ACTIVATE CONNECTION TO MONITORING SYSTEM (BY OTHERS) TO TRANSMIT A SIGNAL TO FIRE DEPARTMENT OR APPROVED CENTRAL STATION.
- AN ALARM CAN BE RESET BY PRESSING THE "RESET" BUTTON ON THE CONTROL PANEL.

IF A SUPERVISORY SIGNAL IS INITIATED IN ANY AREA OF THE BUILDING BY ONE OF THE FOLLOWING:
- SPRINKLER SYSTEM LOSS OF PRESSURE
- MOVEMENT OF A FIRE PROTECTION WATER SUPPLY OR SPRINKLER VALVE.

THE MAIN FIRE ALARM CONTROL PANEL SHALL INITIATE THE FOLLOWING ALARM SEQUENCE OF OPERATIONS:
- INDICATE THE SUPERVISORY CONDITION BY LIGHTING THE "COMMON SUPERVISORY" AMBER LED AT THE CONTROL PANEL.
- INDICATE THE SUPERVISORY POINT (DEVICE DESCRIPTION) ON THE CONTROL PANEL'S ALPHA–NUMERIC DISPLAY.
- SOUND THE CONTROL PANEL AUDIBLE BUZZER, AND THE REMOTE ANNUNCIATOR AUDIBLE BUZZER.
- THE REMOTE ANNUNCIATOR SHALL INDICATE EXACT ZONE WHERE THE SUPERVISORY EVENT ORIGINATED BY ILLUMINATING A CORRESPONDING LABELED AMBER LED INDICATOR.
- ACTIVATE CONNECTION TO MONITORING SYSTEM (BY OTHERS) TO TRANSMIT A SIGNAL TO FIRE DEPARTMENT OR APPROVED CENTRAL STATION.
- THE CONTROL PANEL BUZZER AND REMOTE ANNUNCIATOR BUZZER CAN BE SILENCED BY PRESSING THE "ACKNOWLEDGE" AT THE CONTROL PANEL.

IF A TROUBLE SIGNAL IS INITIATED IN ANY AREA OF THE BUILDING BY ONE OF THE FOLLOWING:
- OPEN CIRCUIT FAULT,
- SHORT CIRCUIT FAULT ON ADDRESSABLE LOOP, SIGNAL CIRCUIT, OR REMOTE ANNUNCIATOR CIRCUIT,
- FAILURE OF SUPERVISED INDICATOR ON REMOTE ANNUNCIATOR,
- DISCONNECTION OR FAILURE OF THE BATTERY PACK,
- GROUND CONDITION ON FIELD WIRE,
- FAILURE OF 120VAC POWER,
- REMOVAL OR MALFUNCTION OF ADDRESSABLE DEVICE OR CONTROL PANEL COMPONENT.

THE MAIN FIRE ALARM CONTROL PANEL SHALL INITIATE THE FOLLOWING ALARM SEQUENCE OF OPERATIONS:
- INDICATE THE TROUBLE CONDITION BY LIGHTING THE "COMMON TROUBLE" AMBER LED AT THE CONTROL PANEL.
- INDICATE THE NATURE OF THE TROUBLE ON THE CONTROL PANEL'S ALPHA–NUMERIC DISPLAY.
- SOUND THE CONTROL PANEL AUDIBLE BUZZER, AND THE REMOTE ANNUNCIATOR AUDIBLE BUZZER.
- ACTIVATE CONNECTION TO MONITORING SYSTEM (BY OTHERS) TO TRANSMIT A SIGNAL TO FIRE DEPARTMENT OR APPROVED CENTRAL STATION.
- THE CONTROL PANEL BUZZER AND REMOTE ANNUNCIATOR BUZZER CAN BE SILENCED BY PRESSING THE "ACKNOWLEDGE" AT THE CONTROL PANEL.



ENTERPHONE DETAIL MIRCOM TX3–120C
NTS

ELECTRIC FORCE FLOW HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	COLOUR	MOUNTING	HEATING	AIR FLOW	VOLTAGE	DIMENSIONS	CONTROLS
FF–1	OUELLET	OAC02000	WHITE	SURFACE	2000 Watts	160 cfm	208V	16–1/8"W x 22–1/16"H x 4–5/16"D	BUILT IN TAMPERPROOF THERMOSTAT
FF–2	OUELLET	OACP4008	WHITE	CEILING RECESSED	4000 Watts	160 cfm	208V	16–1/8"W x 22–1/16"H x 4–5/16"D	BUILT IN TAMPERPROOF THERMOSTAT
FF–2	OUELLET	OACP4008	WHITE	CEILING SURFACE	4000 Watts	160 cfm	208V	16–1/8"W x 22–1/16"H x 4–5/16"D	BUILT IN TAMPERPROOF THERMOSTAT

NOTES: ADDITIONAL COSTS INCURRED AS A RESULT OF ANY ALTERNATIVE MODELS ARE AT THE EXPENSE OF THE CONTRACTOR. CONFIRM WITH ALL DRAWINGS & SITE CONDITIONS PRIOR TO ORDERING.

ELECTRIC BASEBOARD HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	COLOUR	HEATING	VOLTAGE	DIMENSIONS	CONTROLS
BB–1	OUELLET	OFM0302	WHITE	300 Watts	120V	22–5/16"L x 5–13/16"H x 2–7/16"D	BUILT IN TAMPERPROOF THERMOSTAT
BB–2	OUELLET	OFM0752	WHITE	750 Watts	120V	37–3/16"L x 5–13/16"H x 2–7/16"D	BUILT IN TAMPERPROOF THERMOSTAT
BB–3	OUELLET	OFM01008	WHITE	1000 Watts	208V	47–1/2"L x 5–13/16"H x 2–7/16"D	BUILT IN TAMPERPROOF THERMOSTAT

NOTES: ADDITIONAL COSTS INCURRED AS A RESULT OF ANY ALTERNATIVE MODELS ARE AT THE EXPENSE OF THE CONTRACTOR.

BUILDING PERMIT #
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CITY OF OSHAWA

EMERGENCY LIGHT BACK–UP UNIT SCHEDULE

TAG	MANUFACTURER	MODEL
BU–1–3	LUMACELL	RG12S–72–2–LD10
BU–4–8	LUMACELL	RG12S–100–2–LD10
BU–9	LUMACELL	RG12S–72–2–LD10
BU–1–11,12	LUMACELL	RG12S–100–2–LD10

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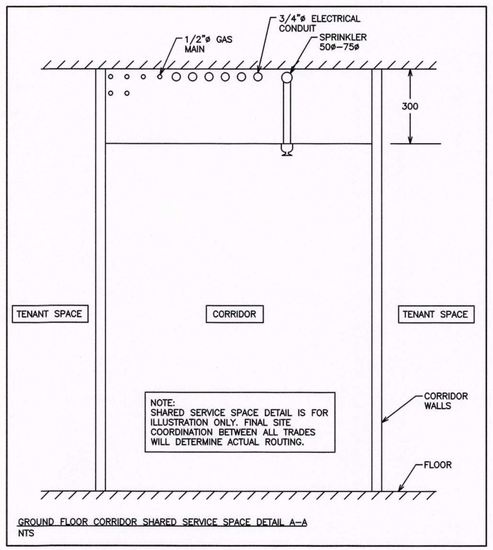
NOTE:
1. CLASS 'A' WIRING AS PERMITTED BY ONTARIO BUILDING CODE FOR IN–SUITE MINI HORNS. A SEPARATE CIRCUIT SHALL BE PROVIDED FOR SUITE HORNS AND CORRIDOR HORN/STROBES.
2. PROVIDE ENOUGH RELAYS FOR ALL EXPECTED DEVICES AS WELL AS MINIMUM 3 SPARE RELAYS.
3. REFER TO FLOOR PLANS FOR ACTUAL QUANTITY OF DEVICES.

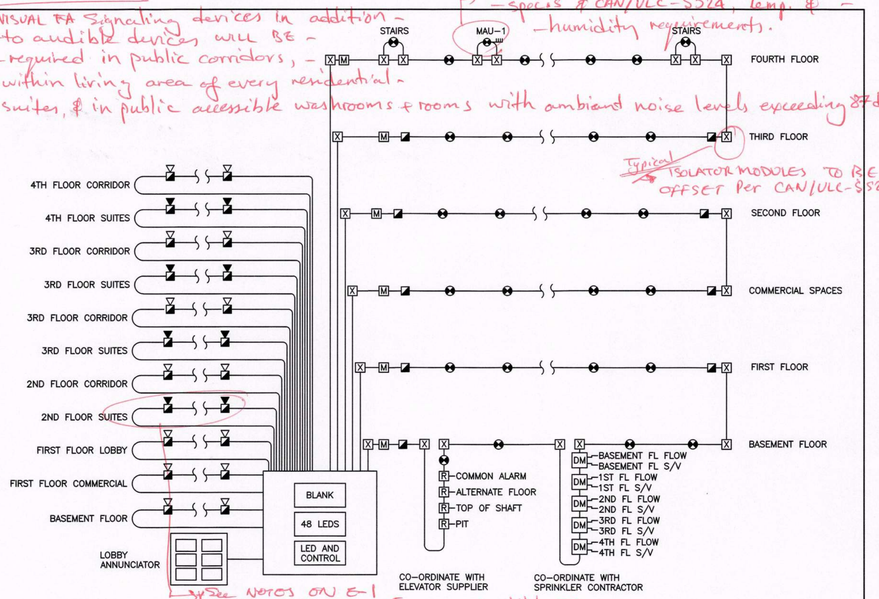


GROUND FLOOR CORRIDOR SHARED SERVICE SPACE DETAIL A–A
NTS

NOTE TYPICAL

VISUAL FA Signalling devices in addition – to audible devices will BE – required in public corridors, – within living area of every residential – suites, & in public accessible washrooms & rooms with ambiant noise levels exceeding 87 dBA

INSTALL IN ACCORDANCE WITH manufacturer – specs & CAN/ULC–S524, Temp. & – humidity requirements.



NOTE:
DEVICES SHOWN FOR ILLUSTRATION ONLY. REFER TO FLOOR PLANS FOR DEVICE QUANTITY, TYPE AND LOCATION.

NOTE:
FIRE ALARM SHALL BE MONITORED BY A CENTRAL STATION (OUTSIDE FIRE ALARM MONITORING COMPANY) CONFORMING TO CAN/ULC–5561.

NOTE:
ALL SPRINKLER AND STANDPIPE CONTROL VALVES SHALL BE SUPERVISED BY BUILDING FIRE ALARM SYSTEM.

FIRE ALARM RISER DIAGRAM
NTS

FIRE ALARM DEVICES	
	SMOKE DETECTOR
	FIRE ALARM HORN (CORRIDOR) WITH STROBE
	FIRE ALARM HORN (SUITE) WITH STROBE
	DUCT SMOKE DETECTOR
	HEAT DETECTOR
	FIRE ALARM PULL STATION
X	ISOLATOR MODULE
DM	DUAL MONITOR MODULE
M	MONITOR MODULE

FIRE ALARM ZONES	
ZONE	ALARM
1	BASEMENT
2	RESIDENTIAL LOBBY
3	COMMERCIAL UNITS
4	SECOND FLOOR
5	THIRD FLOOR
6	FOURTH FLOOR
7	EAST STAIRWELL
8	WEST STAIRWELL
9	ELEVATOR SHAFT
10	DUCT SMOKE (MUA–1)
11	BASEMENT SPRINKLER (FS)
12	FIRST FLOOR SPRINKLER (FS)
13	SECOND FLOOR SPRINKLER (FS)
14	THIRD FLOOR SPRINKLER (FS)
15	FOURTH FLOOR SPRINKLER (FS)
16	ELEVATOR SHAFT SPRINKLER (FS)
17	MAIN ALARM VALVE
18	SPARE
19	SPARE
20	SPARE
ZONE	SUPERVISORY
21	SPRINKLER – POWER LOSS (EXCESS PRESS PUMP)
22	SPRINKLER – BACKFLOW PREVENTER INLET (SV)
23	SPRINKLER – BACKFLOW PREVENTER OUTLET (SV)
24	SPRINKLER – BACKFLOW PREVENTER INLET (SV)
25	SPRINKLER – BACKFLOW PREVENTER OUTLET (SV)
26	SPRINKLER – BASEMENT (SV)
27	SPRINKLER – FIRST FLOOR (SV)
28	SPRINKLER – SECOND FLOOR (SV)
29	SPRINKLER – THIRD FLOOR (SV)
30	SPRINKLER – FOURTH FLOOR (SV)
31	SPRINKLER – ELEVATOR SHAFT (SV)
32	STANDPIPE EAST
33	STANDPIPE WEST
34	WET SPRINKLER MAIN
35	SPARE
36	SPARE
37	SPARE
38	SPARE
39	SPARE
40	SPARE
CIRCUITS	
HORN CIRCUIT GROUND FLOOR LOBBY	
HORN CIRCUIT GROUND FLOOR COMMERCIAL	
HORN CIRCUIT SECOND FLOOR COMMON	
HORN CIRCUIT SECOND FLOOR SUITES	
HORN CIRCUIT THIRD FLOOR COMMON	
HORN CIRCUIT THIRD FLOOR SUITES	
FAN SHUT DOWN (MAU–1)	

NOTES:
1) PROVIDE RELAYS AS REQUIRED FOR ELEVATOR RECALL.
2) PROVIDE ISOLATION MODULES ON ADDRESSABLE LOOP AS REQUIRED BY CODE.
3) SYNCHRONIZE ALL SIGNAL CIRCUITS EQUIPPED WITH STROBES.

4th floor?

FIRE ALARM SYSTEM SCHEDULE

DEVICE	MANUFACTURER	MODEL
SMOKE DETECTOR	MIRCOM	MIX–2251B
DUCT SMOKE DETECTOR	MIRCOM	MIX–DH3000 SERIES
PULL STATIONS	MIRCOM	MS–401AD
MINI–HORN	MIRCOM	MH–S25WA
HORN/STROBE COMBO	MIRCOM	FHS–340W
ADDRESSABLE MODULES	MIRCOM	MIX–M500M/MIX–M500DM/MIX–500R
FIRE ALARM CONTROL PANEL	MIRCOM	FX–2017–12ADS C/W ALC–396S, RM–100BA, FOUR(4) SGM–1004A, TWO(2) RAX–1048TZDS

INSTALL OR EXTEND THE BUILDING FIRE ALARM SYSTEM IN CONFORMANCE WITH O.B.C. 3.2.4. AND CAN/ULC-S524-06

EMERGENCY LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH O.B.C. DIV.B. 3.2.7.3.OR DIV. B.9.9.12.3. FOR PART 9 BUILDINGS.

EXIT SIGNS SHALL BE INSTALLED IN CONFORMANCE WITH 2012 O.B.C. DIV.B. 3.4.5.1. OR DIV.B. 9.9.11.3 FOR PART 9 BUILDINGS.

TYPICAL SUITE NOTES

1. CONTRACTOR SHALL INSTALL RECEPTACLES IN UNITS SO THAT EVERY POINT OF USABLE WALL SPACE SHALL BE WITHIN 1800mm OF A RECEPTACLE WHEN MEASURED ALONG THE WALL AT FLOOR.
2. OUTLETS ON PARTY WALLS SHALL BE SPACED 450mm APART TO PROVIDE FIRE SEPARATION.
4. ELECTRICAL CONTRACTOR SHALL VERIFY LOCATION OF SUSPENDED CEILING WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING–IN OF OUTLET BOXES.
5. DO NOT RUN HORIZONTAL CONDUITS IN SHEAR WALLS.
6. CONDUITS IN FLOOR SLABS MUST BE MIN. 2 1/2" ABOVE PLYWOOD FORMS.
7. DO NOT CUT OR DRILL HOLES IN PLYWOOD. USE SMALL PLASTIC BOXES TO RECEIVE CONDUIT ENDS.
8. COORDINATE AND OBTAIN EXACT LOCATION OF MECHANICAL EQUIPMENT FROM MECHANICAL DRAWINGS.
9. ELECTRICAL CONTRACTOR SHALL ENSURE THAT SWITCH LOCATION DOES NOT INTERFERE WITH CLOSING DOORS.
10. LOCATION OF WASHROOM SWITCHES AND HEATER SHALL BE CONFIRMED WITH SAFETY INSPECTOR PRIOR TO ROUGHING–IN.
11. COORDINATE LOCATION OF SMOKE ALARMS AND HEAT DETECTORS WITH MECHANICAL EQUIPMENT. DEVICES SHALL BE AT LEAST 5'–0" FROM ANY EXHAUST OR RETURN AIR GRILLES.
12. ONLY TYPICAL UNIT LAYOUTS ARE SHOWN. OTHER UNITS NOT DETAILED ARE SIMILAR.
13. INSTALL SWITCHES ON LOCK SIDE OF DOORS. CONFIRM LOCATION WITH ARCHITECTURAL DRAWINGS.
14. WHERE MORE THAN ONE SMOKE DETECTOR ALARM IS REQUIRED IN A UNIT. THEY SHALL BE WIRED SO THAT ACTIVATION OF ONE ALARM WILL CAUSE ALL ALARMS WITHIN THE SUITE TO SOUND.
15. ALL BEDROOM RECEPTACLES SHALL BE PROTECTED BY ARC FREE CIRCUIT BREAKER.
16. ALL FIRE ALARM HORNS WITH A SUITE SHALL BE WIRED TO AND CONTROLLED BY A SILENCE SWITCH AT FIRE ALARM PANEL AS PER LATEST O.B.C.
17. SUPPLY AND INSTALL MARKED TAMPERPROOF RECEPTACLES AS REQUIRED BY SECTION 26–712(g) OF THE ELECTRICAL CODE WITH EXCEPTION AS PER SECTION 26–712(h).

STANDPIPE SYSTEM IS TO BE ~~INSTALLED OR EXTENDED~~ IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.9. & NFPA 14-2010

SPRINKLER SYSTEM IS TO BE INSTALLED OR EXTENDED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE DIV.B.3.2.5. & NFPA 13-2013

See E1, E2, E3 – – for typical notes.

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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100139545
See 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'
DRAWN BY:	C.P.D.
DESIGN BY:	C.P.D./G.V.W.O.
CHECKED BY:	G.V.W.O.
DATE:	DECEMBER 2016

PROJECT NO. 115705
DRAWING NO. E8
CAD FILE: 115705 E
PLOT DATE: 12/20/16
SUBMISSION: PERMIT

NOT TO SCALE

RP-1 PANEL

60 CIRCUIT, 200A, 120/208 VOLT, 3 PHASE, 4 W. SURFACE MOUNTED CIRCUIT BREAKER PANEL BOARD WITH 200 AMPERE MAIN LUGS ONLY

* DENOTES BREAKER LOCK-ON DEVICE

DESCRIPTION	BKR	CCT	S/N	CCT	BKR	DESCRIPTION
FURNACE	15A	1		2	15A	UNIT LTS
A/C UNIT	25A	3		4	15A	EM LTS (RED)
		5		6	15A	EXTERIOR SIGN
BB-1	15A	7		8	15A	RECEPTACLES
EXTERIOR SIGN	15A	9		10	15A	HRV-3
SPACE	–	11		12	–	SPACE
SPACE	–	13		14	–	SPACE
SPACE	–	15		16	–	SPACE
SPACE	–	17		18	–	SPACE
SPACE	–	19		20	–	SPACE
SPACE	–	21		22	–	SPACE
SPACE	–	23		24	–	SPACE
SPACE	–	25		26	–	SPACE
SPACE	–	27		28	–	SPACE
SPACE	–	29		30	–	SPACE
SPACE	–	31		32	–	SPACE
SPACE	–	33		34	–	SPACE
SPACE	–	35		36	–	SPACE
SPACE	–	37		38	–	SPACE
SPACE	–	39		40	–	SPACE
SPACE	–	41		42	–	SPACE
SPACE	–	43		44	–	SPACE
SPACE	–	45		46	–	SPACE
SPACE	–	47		48	–	SPACE
SPACE	–	49		50	–	SPACE
SPACE	–	51		52	–	SPACE
SPACE	–	53		54	–	SPACE
SPACE	–	55		56	–	SPACE
SPACE	–	57		58	–	SPACE
SPACE	–	59		60	–	SPACE

RP-2 PANEL

60 CIRCUIT, 200A, 120/208 VOLT, 3 PHASE, 4 W. SURFACE MOUNTED CIRCUIT BREAKER PANEL BOARD WITH 200 AMPERE MAIN LUGS ONLY

* DENOTES BREAKER LOCK-ON DEVICE

DESCRIPTION	BKR	CCT	S/N	CCT	BKR	DESCRIPTION
FURNACE	15A	1		2	15A	UNIT LTS
A/C UNIT	50A	3		4	15A	EM LTS (RED)
		5		6	15A	EXTERIOR SIGN
BB-1	15A	7		8	15A	RECEPTACLES
EXTERIOR SIGN	15A	9		10	15A	HRV-3
SPACE	–	11		12	–	SPACE
SPACE	–	13		14	–	SPACE
SPACE	–	15		16	–	SPACE
SPACE	–	17		18	–	SPACE
SPACE	–	19		20	–	SPACE
SPACE	–	21		22	–	SPACE
SPACE	–	23		24	–	SPACE
SPACE	–	25		26	–	SPACE
SPACE	–	27		28	–	SPACE
SPACE	–	29		30	–	SPACE
SPACE	–	31		32	–	SPACE
SPACE	–	33		34	–	SPACE
SPACE	–	35		36	–	SPACE
SPACE	–	37		38	–	SPACE
SPACE	–	39		40	–	SPACE
SPACE	–	41		42	–	SPACE
SPACE	–	43		44	–	SPACE
SPACE	–	45		46	–	SPACE
SPACE	–	47		48	–	SPACE
SPACE	–	49		50	–	SPACE
SPACE	–	51		52	–	SPACE
SPACE	–	53		54	–	SPACE
SPACE	–	55		56	–	SPACE
SPACE	–	57		58	–	SPACE
SPACE	–	59		60	–	SPACE

PANEL "HP"

80 CIRCUIT, 200A, 120/208 VOLT, 3 PHASE, 4 W. SURFACE MOUNTED CIRCUIT BREAKER PANEL BOARD WITH 200 AMPERE MAIN LUGS ONLY

* DENOTES BREAKER LOCK-ON DEVICE

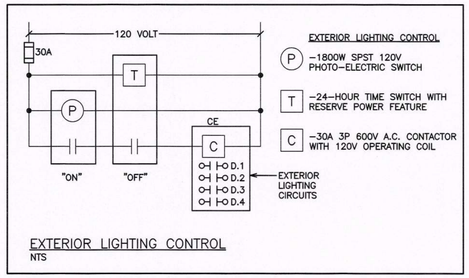
DESCRIPTION	BKR	CCT	S/N	CCT	BKR	DESCRIPTION
FACP (RED)	20A	1		2	15A	GAS / WATER ROOM REC
		3		4	15A	STAIRWELL LTS
SPARE	15A	5		6	15A	STAIRWELL LTS
GAS / WATER ROOM LTS.	15A	7		8	15A	ENTRY PHONE
FF-1 WATER METER RUN	15A	9		10	15A	LOBBY REC
		11		12	15A	LOBBY LTS
STAIRWELL REC	15A	13		14	15A	FF-1 STAIRWELL
STAIRWELL REC	15A	15		16		
FF-3 STAIRWELL	15A	17		18	15A	BB-3
		19		20		
EM LTS (RED)	15A	21		22	15A	BB-3
BB-3	15A	23		24		
		25		26	15A	BB-3
BB-3	15A	27		28		
		29		30	15A	BB-3
BB-3	15A	31		32		
		33		34	15A	BB-3
BB-2 MECH ROOM	15A	35		36		
EXTERIOR LTS PANEL	30A	37		38	15A	ELEV REC
		39		40	15A	ELEV LTS
BASEMENT LTS	15A	41		42	15A	BASEMENT EM LTS (RED)
BASEMENT REC	15A	43		44	15A	2ND FLOOR REC
2ND FLOOR LTS	15A	45		46	15A	2ND FLOOR EM LTS (RED)
3RD FLOOR REC	15A	47		48	15A	3RD FLOOR EM LTS (RED)
3RD FLOOR LTS	15A	49		50	15A	4TH FLOOR EM LTS (RED)
BB-1	15A	51		52	15A	4TH FLOOR REC
BB-1	15A	53		54	15A	4TH FLOOR LTS
BASEMENT HRV	15A	55		56	15A	FF-2
ELEVATOR	80A	57		58		
		59		60	15A	ELECTRICAL ROOM RECEPTACLES
		61		62	15A	ELECTRICAL ROOM LIGHTS
ELEVATOR ROOM REC	15A	63		64		
FF-2	15A	65		66	70A	MAU-1
		67		68		
CATV RECEPTACLE	15A	69		70	–	SPACE
TELEPHONE RECEPTACLE	15A	71		72	–	SPACE
SPACE	–	73		74	–	SPACE
SPACE	–	75		76	–	SPACE
SPACE	–	77		78	–	SPACE
SPACE	–	79		80	–	SPACE

PANEL "LP"

EXTERIOR LIGHTING PANEL

24 CIRCUIT, 30A, 120/208V, RECESS MOUNTED CIRCUIT

DESCRIPTION	LOAD	BKR	CCT		CCT	BKR	LOAD	DESCRIPTION
POLE LIGHTING	–	15A	1		2	15A	–	POLE LIGHTING
EXTERIOR SIGN	–	15A	3		4	15A	–	BUILDING LIGHTING
.	–	.	5		6	.	–	.
.	–	.	7		8	.	–	.
.	–	.	9		10	.	–	.
.	–	.	11		12	.	–	.
.	–	.	13		14	.	–	.
.	–	.	15		16	.	–	.
.	–	.	17		18	.	–	.
.	–	.	19		20	.	–	.
.	–	.	21		22	.	–	.
.	–	.	23		24	.	–	.



EXTERIOR LIGHTING CONTROL

NTS

TYPICAL SUITE PANEL 'TP'

100 A, 120/208 V, 1 PH., 3 W. MAINS

#* INDICATES GFI BREAKER

#** PROVIDE BREAKER LOCKING DEVICES

1-PHASE

TYPICAL SUITE

RECESSED MOUNTED DOUBLE LUGS

DESCRIPTION	LOAD	BKR	CCT		CCT	BKR	LOAD	DESCRIPTION
WASHROOM RECEPTACLE	500W	*15A	1		2	15A	130W	BEDROOM LTS
BEDROOM LAMP PLUG	–	**15A	3		4	15A	244W	HALL/KITCHEN/LIVING LTS
BEDROOM RECEPTACLE	500W	**15A	5		6	15A	140W	WASHROOM LTS/EXHAUST
BEDROOM LAMP PLUG	500W	**15A	7		8	20A	1500W	
BEDROOM RECEPTACLE	500W	15A	9		10	40A	6KW	STOVE
LIVING RM. RECEPTACLE	–	15A	11		12			
KITCHEN GFI RECEPTICLE	–	*20A	13		14	15A	3000w	MP-1
KITCHEN GFI RECEPTICLE	–	*20A	15		16			
FRIDGE	550W	15A	17		18	15A	–	SPARE
DRYER	–	30A	19		20	15A	–	SMOKE ALARM
			21		22	15A	–	COMMUNICATIONS REC.
HALLWAY RECEPTACLES	–	15A	23		24	15A	–	DISHWASHER
HWT-1	–	20A	25		26	15A	–	RANGE HOOD
			27		28	15A	–	DRYER BOOSTER
SPACE	–	.	29		30	.	–	SPACE
SPACE	–	.	31		32	.	–	SPACE
SPACE	–	.	33		34	.	–	SPACE
SPACE	–	.	35		36	.	–	SPACE
SPACE	–	.	37		38	.	–	SPACE
SPACE	–	.	39		40	.	–	SPACE
SPACE	–	.	41		42	.	–	SPACE

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
PER:
CHIEF BUILDING OFFICIAL

BUILDING PERMIT #
201602195
CITY OF OSHAWA

NO.	REVISION	DATE	BY	APPROVED
5	ISSUED FOR PERMIT	DEC 20	G.O.	G.V.W.O.
4	ISSUED FOR PRICING	DEC 13	G.O.	G.V.W.O.
3	ISSUED FOR PRICING AND ARCH. COORD.	OCT 28	G.O.	G.V.W.O.
2	ISSUED FOR COORDINATION	SEP 29	G.O.	G.V.W.O.
1	ISSUED FOR COORDINATION	SEP 16	G.O.	G.V.W.O.

REVISIONS

496 TAUNTON ROAD EAST, OSHAWA, ONTARIO
PETER HOOGER

ELECTRICAL PANEL SCHEDULES

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LICENSED PROFESSIONAL ENGINEER
G.V.W. OSBORNE
100138545
Dec 20/16
PROVINCE OF ONTARIO

SCALE:	3/16" = 1'	PROJECT NO.	115705
DRAWN BY:	C.P.D.	DRAWING NO.	E9
DESIGN BY:	C.P.D./G.V.W.O.		
CHECKED BY:	G.V.W.O.	CAD FILE: 115705 E	
DATE:	DECEMBER 2016	PLOT DATE: 12/20/16	
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